California Regional Water Quality Control Board

Los Angeles Region

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

Linda S. Adams
Agency Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: http://www.waterboards.ca.gov/losangeles

Arnold Schwarzenegger
Governor

517

May 7, 2007

State Clearinghouse
Governor's Office of Planning and Research
1400 Tenth Street, Room 222
Sacramento, CA 95814

CERTIFIED RETURN RECIEPT
7005 0390 0000 4141 1319

PILOT TESTS TO EVALUATE REMEDIATION OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER BY ENHANCED IN-SITU BIOREMEDIATION WITH BIOAUGMENTATION, BOEING REALTY CORPORATION, FORMER C-6 FACILITY, 19503 SOUTH NORMANDIE, LOS ANGELES, CALIFORNIA (FILE NO. 95-036; SLIC NO. 410; SITE ID NO. 1846000)

Dear Interested Parties:

The Regional Water Quality Control Board (Regional Board) is overseeing the investigation, remediation and monitoring of soil and groundwater contamination at this facility (Facility) and the Boeing Realty Corporation (Discharger) proposes to conduct pilot tests to evaluate the effectiveness of enhanced in-situ bioremediation with bioaugmentation of volatile organic compounds (VOCs) in shallow groundwater at the Facility. The buildings at the Facility have been demolished and the property has been sold and redeveloped, with the exception of Lot 8 of Parcel C which is still owned by the Discharger. The site is currently used for commercial/light industrial purposes.

The Discharger proposes to conduct pilot test to evaluate the remediation of chlorinated VOCs in shallow groundwater by enhanced in-situ bioremediation (biorecirculation and/or slug injections) with bioaugmentation technologies to remediate selected source areas. These technologies involve addition of selected amendments (i.e. lactate, edible oils, ethanol, etc.) and in some areas using a non-pathogenic, naturally derived (i.e., not genetically engineered), chlorinated ethene degrading consortium, referred to as SDC-9™ or KB-1™ containing a Dehalococcoides ethenogenes culture to create a reducing condition in groundwater to facilitate reductive dechlorination of chlorinated volatile organic compounds.

On January 24, 2002, this Regional Board adopted General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites (Order No. R4-2002-0030) ("General WDR"). This General WDR permits the injection of selected carbon source amendments proposed for use at this Facility. On February 4, 2003, the Discharger was granted coverage under the General WDR to begin injection of carbon source amendments within the Building 2 area. The General WDR does not cover the use of SDC-9™ or KB-1™ containing a Dehalococcoides ethenogenes culture, therefore, these Site-Specific waste discharge requirements (Site-Specific WDR) have been developed for the pilot test activities for the addition of SDC-9™ or KB-1™ containing a Dehalococcoides ethenogenes culture at the entire Facility. This Site-Specific WDR will also cover the use of carbon source amendments, therefore, a letter rescinding the General WDR will be issued once this Site-Specific WDR is adopted.

The Discharger has submitted a report of waste discharge and an initial study for the proposed pilot tests and the use of electron donors with chlorinated-ethene degrading consortium, referred to as SDC-9™ or KB-1™. In accordance with the California Environmental Quality Act (CEQA), this Regional Board has prepared an Initial Study for the remediation of VOCs in shallow groundwater by the addition of electron donors with chlorinated-ethene degrading consortium, referred to as SDC-9™ or KB-1™ into shallow groundwater to facilitate the bioremediation of VOCs. The Regional Board has determined that the proposed pilot test and the use of electron donors with chlorinated–ethene degrading consortium, referred to as SDC-9™ or KB-1™ will not have a significant adverse effect on the environment, and therefore, has prepared a Mitigated Negative Declaration. The Regional Board has also prepared Tentative Waste Discharge Requirements to regulate the use electron donors with chlorinated–ethene degrading consortium, referred to as SDC-9™ or KB-1™ and to monitor groundwater quality and groundwater flow conditions during remediation.

The enclosed 15 copies of the Notice of Preparation, Initial Study, Mitigated Negative Declaration, and Tentative Waste Discharge Requirements describe the location and nature of the project. The Regional Board hereby submits the Initial Study, Mitigated Negative Declaration, Certificate of Fee Exemption, and Tentative Waste Discharge Requirements to the State Clearinghouse for review and distribution. This Regional Board will accept comments from any interested party until **June 11, 2007**.

Please call Ms. Ana Townsend at (213) 576-6738 or Ms. Su Han at (213) 576-6735 if you have any questions.

Sincerely,

Su Han, PG, CHG
Senior Engineering Geologist
Chief of Site Cleanup Unit I

Enclosures

1. Notice of Preparation
2. Initial Study
3. Fish & Game Commission Certificate of Fee Exemption
4. Resolution Approving the Environmental Checklist and a Adopting Mitigated Negative Declaration
5. Cover Letter Transmitting Tentative Waste Discharge Requirements
6. Tentative Waste Discharge Requirements
7. Tentative Monitoring and Reporting Program

cc: See Next Page

cc: United States Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
Jeffrey Dhont, United States Environmental Protection Agency, Region 9
John Youngerman, State Water Resources Control Board, Division of Water Quality
Department of Fish and Game, Region 5
Kurt Souza, State Department of Health Services, Drinking Water Field Operations Branch
Tom Cota, Department of Toxic Substances Control, Cypress
Brian Hooper, Los Angeles County Department of Public Works, Waste Management Division
Carl G. Brooks, South Coast Air Quality Management District
Ted Johnson, Water Replenishment District of Southern California
Cheryl Ross, West Basin Municipal Water District
Mark Stuart – Central Basin, California Department of Water Resources
National Resources Defense Council
Los Angeles County Department of Health Services, Environmental Health
Alex P. Carlos, Regional Water Quality Control Board, Region 4
Robert Scott, Boeing Realty
Ravi Subramanian, CDM
Joseph Weidmann, Haley & Aldrich

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Arnold Schwarzenegger
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NOTICE OF PREPARATION OF MITIGATED NEGATIVE DECLARATION
CALIFORNIA ENVIRONMENTAL QUALITY ACT

TO ALL INTERESTED AGENCIES, GROUPS AND PERSONS:

This will serve as notice that the Los Angeles Regional Water Quality Control Board (Regional Board) has prepared a Mitigated Negative Declaration on the following project in accordance with the provisions of the California Environmental Quality Act (CEQA).

Project Title: Remediation of Volatile Organic Compounds in Groundwater by Enhanced In-Situ Bioremediation with Bioaugmentation

Project Location (within Los Angeles County): 19503 South Normandie, Los Angeles, CA

Project Description: Under the oversight of the Regional Board, Boeing Realty Corporation (Discharger) is investigating and remediating soil and groundwater volatile organic compound (VOC) impacts at the 170-acre Former C-6 Facility. The Discharger proposes to implement semi-continuous injections of an electron donor amendment and bioaugmentation culture, which involves the addition of selected non-pathogenic (naturally derived, not genetically engineered) chlorinated ethene-degrading Dehalococcoides ethenogenes culture (referred to as Shaw's SDC-9™ culture, or SiREM's KB-1™) in select areas to facilitate reductive dechlorination of chlorinated volatile organic compounds, with groundwater extraction to remediate the former Building 1/36 source area. This approach is referred to as Biorecirculation. The pilot test study is proposed to be conducted by the following: 1) continuous groundwater extraction from the B-Sand from well EWB001; 2) conveyance of the extracted water to the remediation compound in the northeast corner of the Building 1/36 area; 3) continuous re-injection of groundwater into the B-Sand using a limited subset of existing amendment wells via existing conveyance; and 4) periodic pulsed addition of electron donor solution and one or two-time addition of bioaugmentation cultures into the extracted water prior to re-injection. The electron donors and bioaugmentation cultures being evaluated during the pilot test study includes: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, Newman Zone, Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. It is anticipated that the extracted water will be amended with the electron donor for approximately 5% to 50% of the operational time. A tracer such as bromide may be added to the re-injected groundwater in order to improve understanding of the local hydraulics. If a tracer test is performed, monitoring for the tracer will be performed. The periodic/pulsed injection of electron donor is expected to minimize the potential for biofouling. However, if necessary, low concentrations of biofouling control chemicals which are routinely used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance.

The Discharger may elect to continue and/or expand the biorecirculation study across the entire Building 1/36 area using a combination of existing injection well network and new infrastructure. Prior to continuing or expanding the study, the Discharger will submit a Work Plan Addendum for the Regional Board approval. Boeing may also elect to continue periodic slug injections or initiate biorecirculation as part of additional pilot study at Building 2 area of the Site using a combination of existing injection well network and new infrastructure. Limited slug amendment injections were conducted in this area in 2004 under Regional Board Order No. R4-2002-0030 "General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites" (General WDR). Prior to implementing

any such additional injections, the Discharger will submit a Work Plan Addendum for the Regional Board approval. If conducted, it is anticipated that one or more of the following electron donors/carbon sources will be used: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, and Newman Zone; and one of the following bioaugmentation cultures will be used: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. With the exception of the JRW proprietary fermentation mother liquor and citrate, the rest of the electron donors/carbon sources are approved for use under the General WDR. This Site-Specific WDR will cover the use of all of the above-mentioned electron donors/carbon sources; therefore, once this permit is adopted, a letter rescinding the General WDR will be issued.

The Discharger has submitted a report of waste discharge for the proposed pilot tests and the use of electron donors with chlorinated-ethene degrading consortium, referred to as SDC-9™ or KB-1™. In accordance with the California Environmental Quality Act (CEQA), this Regional Board has prepared an Initial Study and Mitigated Negative Declaration. The Initial Study documents the reasons to support the finding of the Mitigated Negative Declaration that the project will not have a significant adverse effect on the environment. The Initial Study and the Mitigated Negative Declaration are on file at the address above and are available for public examination at the Regional Board, Monday through Friday between the hours of 8:00 a.m. to 4:50 p.m.

All interested agencies, groups and persons wishing to respond to the finding of Mitigated Negative Declaration are invited to submit written comments for consideration by this Regional Board on or before **June 11, 2007**.

Su Han, PG, CHG
Senior Engineering Geologist
Chief of Site Cleanup Unit I

ENVIRONMENTAL INFORMATION FORM

Initial Study - Part 1

Date Filed: 3 April 2007

General Information

1. Name and address of developer or project sponsor:

Boeing Realty Corporation
4501 Conant St., Building 851, M/C D851-0097
Long Beach, CA 90808

2. Address of project:

Former C-6 Facility (Site)
19503 South Normandie Avenue
Los Angeles, CA

Assessor's Block and Lot Number:

	MAP BOOK	PAGE	PARCEL NO.	TR	Lot
1451 Knox Street, Los Angeles, CA 90501 (Former Bldg 1/36)	7351	037	22	52172	8
1452 Knox Street, Los Angeles, CA 90501 (Former Bldg 2)	7351	037	9	52172	9
	7351	037	10	52172	10
	7351	037	11	52172	11
	7351	037	12	52172	12

3. Name, address, and telephone number of person to be contacted concerning this project:

Robert P. Scott
Boeing Realty Corporation
4501 Conant St., Building 851, M/C D851-0097
Long Beach, CA 90808
562-497-6176

4. Indicate number of the permit application for the project to which this form pertains:

File # 95-036

5. List and describe any other related permits and other public approvals required for this project, including those required by city, regional, state and federal agencies:

General Waste Discharge Requirements (WDR) Permit Application under the California Regional Water Quality Control Board, Los Angeles Region (RWQCB-LA) for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound (VOC) Impacted Sites (File No. 95-036, Order No. R4-2002-0030). Filed separately for In-Situ Reactive Zone Pilot Test at the Former Building 2 area of the Project Compton Facility

includes enhancement of natural biological processes using amendments specified in the General Permit package and as proposed in documents titled "Building 2 In-Situ Reactive Zone Pilot Test Workplan" (Arcadis Building 2 Work Plan) prepared by Arcadis dated August 15, 2001 and "Addendum to the Building 2 In-Situ Reactive Zone Pilot Test Work Plan" (Addendum, dated July 31, 2002) approved under General WDR Permit issued by the RWQCB-LA on February 4, 2003 .

City of Los Angeles Department of Building Safety for electrical permits.

County of Los Angeles for Well Installation Permits

6. Existing zoning district: Commercial/Industrial

7. Proposed use of site (Project for which this form is filed): The Site is currently used for commercial/light industrial purposes.. Under the oversight of the Regional Board, Boeing Realty Corporation (Boeing) is investigating and remediating soil and groundwater volatile organic compound (VOC) impacts at the 170-acre Former C-6 Facility. Boeing proposes to implement bioremediation pilot studies consisting of semi-continuous injections of an electron donor amendment and bioaugmentation culture with groundwater extraction and/or continue periodic slug injections to remediate the Site groundwater. Boeing may elect to continue and/or expand the biorecirculation or periodic slug injections across the entire Site using a combination of existing injection well network and new infrastructure. The biorecirculaton or periodic slug injections will be conducted under a Site-Specific WDR Permit and an approved remediation work plan/addendums. Bioaugmentation using a non-pathogenic, naturally derived, chlorinated ethene degrading consortium, (either Shaw's SDC-9™ culture, or SiREM's KB-1™ culture) will be conducted under this Site-Specific WDR permit. Once the Site-Specific WDR permit is adopted, a letter rescinding the General WDR will be issued.

Project Description

8. Site size: The Former C-6 Site is approximately 170 acres.

9. Square footage: 170 Acres

10. Number of floors of construction: 1

11. Amount of off-street parking provided: 1451 Knox Street -Approximately 160 spaces
1452 Knox Street- Approximately 460 spaces. Redevelopment likely to add approximately 120 parking spaces

12. Attach plans: See attached report for project remediation overview.

13. Proposed scheduling: The estimated duration of the program is three to five years.

14. Associated projects: N/A

15. Anticipated incremental development: Portions of the Site (1452 Knox Street, Former Bldg 2 area) are being redeveloped. Redevelopment includes modification to existing buildings and addition of another building (See Item 17 below).

16. If residential, include the number of units, schedule of unit sizes, range of sale prices or rents, and type of household size expected: N/A

17. If commercial, indicate the type, whether neighborhood, city or regionally oriented, square footage of sales area, and loading facilities: **1451 Knox Street:** 147,000 sq ft warehouse with an office and 26 loading docks. Tenant is CTSI Logistics. **1452 Knox Street:** Two, approximately 425,000 sq ft warehouses with 126 total loading docks. Property Owner and Occupant is Sunrider International. Currently redevelopment plans are underway to add another building (Building C – Refrigeration Building, approximately 20,000 sq ft.) in the courtyard in between Buildings A and B and reduce the number of loading docks..

18. If industrial, indicate type, estimated employment per shift, and loading facilities: N/A

19. If institutional, indicate the major function, estimated employment per shift, estimated occupancy, loading facilities, and community benefits to be derived from the project: N/A

20. If the project involves a variance, conditional use or rezoning application, state this and indicate clearly why the application is required: N/A

Are the following items applicable to the project or its effects?
(Discuss below all items checked "Yes")

21. Change in existing features of any bays, tidelands, beaches, lakes or hills, or substantial alteration of ground contours. [ ] Yes [X] No

22. Change in scenic views or vistas from existing residential areas or public lands or roads. [ ] Yes [X] No

23. Change in pattern, scale or character of general area of project. [ ] Yes [X] No

24. Significant amounts of solid waste or litter. [ ] Yes [X] No

25. Change in dust, ash, smoke, fumes or odors in vicinity. [ ] Yes [X] No

26. Change in ocean, bay, lake, stream or groundwater quality or quantity, or alteration of existing drainage patterns. [X] Yes [ ] No

The bioremediation pilot studies will result in an improvement in groundwater quality by reducing the mass of trichloroethylene (TCE) and other target VOCs in selected source areas. The bioremediation process uses one or more amendments to create anaerobic and reducing conditions to ensure growth of indigenous microorganisms capable of reductive dechlorination of TCE to ethene and ultimately carbon dioxide, chloride, and water. The potential amendments will be limited to those specified in the RWQCB Site-Specific WDR permit. The group of microorganisms capable of reducing TCE and other target VOCs to ethene is referred to as *Dehalococcoides ethenogenes* (DHE). Bioaugmentation using a non-pathogenic, naturally derived, chlorinated ethene degrading consortium, (either Shaw's SDC-9™ culture, or SiREM's KB-1™ culture) will be added to the amendment delivery system to allow for more rapid remediation and/or facilitate complete degradation of TCE and other target VOCs daughter products. The bioaugmentation culture added to ensure complete reduction of TCE daughter products will only grow in the area where amendments (food source) are added. The spread of bioaugmentation culture will be limited to anaerobic areas near and around amendment injection points during and for a period of time after amendment addition, and will be controlled by areas where the groundwater system is aerobic.

27. Substantial change in existing noise or vibration levels in the vicinity. [ ] Yes [X] No

28. Site on filled land or on slope of 10 percent or more. [ ] Yes [X] No

29. Use or disposal of potentially hazardous materials, such as toxic substances, flammables or explosives. [ ] Yes [X] No

30. Substantial change in demand for municipal services (police, fire, water, sewage, etc.). [ ] Yes [X] No

31. Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc.). [ ] Yes [X] No

32. Relationship to a larger project or series of projects. [ ] Yes [X] No

ENVIRONMENTAL SETTING

33. Describe the project site as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site, and the use of the structures. Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

No change in the Project Site topography, soil stability, plants, and animals, or special cultural, historical, or scenic aspects are anticipated to occur. Existing structures are as follows: Site at 1451 Knox Street consists of: 147,000 sq ft warehouse with an office and 26 loading docks. Tenant is CTSI Logistics. No changes are proposed. Site at 1452 Knox Street consists of: Two, approximately 425,000 sq ft warehouses with 126 total loading docks. Property Owner and Occupant is Sunrider International. Currently redevelopment plans are underway to add another building (Building C - Refrigeration Building, approximately 20,000 sq ft.) in the courtyard in between Buildings A and B and reduce the number of loading docks.

34. Describe the surrounding properties, including information on plants and animals and any cultural, historical or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, set-back, rear yard, etc.). Attach photographs of the vicinity. Snapshots or Polaroid photos will be accepted. Surrounding properties contain commercial/industrial facilities, and is heavy intensity (department stores, strip malls, eateries, etc) and is fully developed.

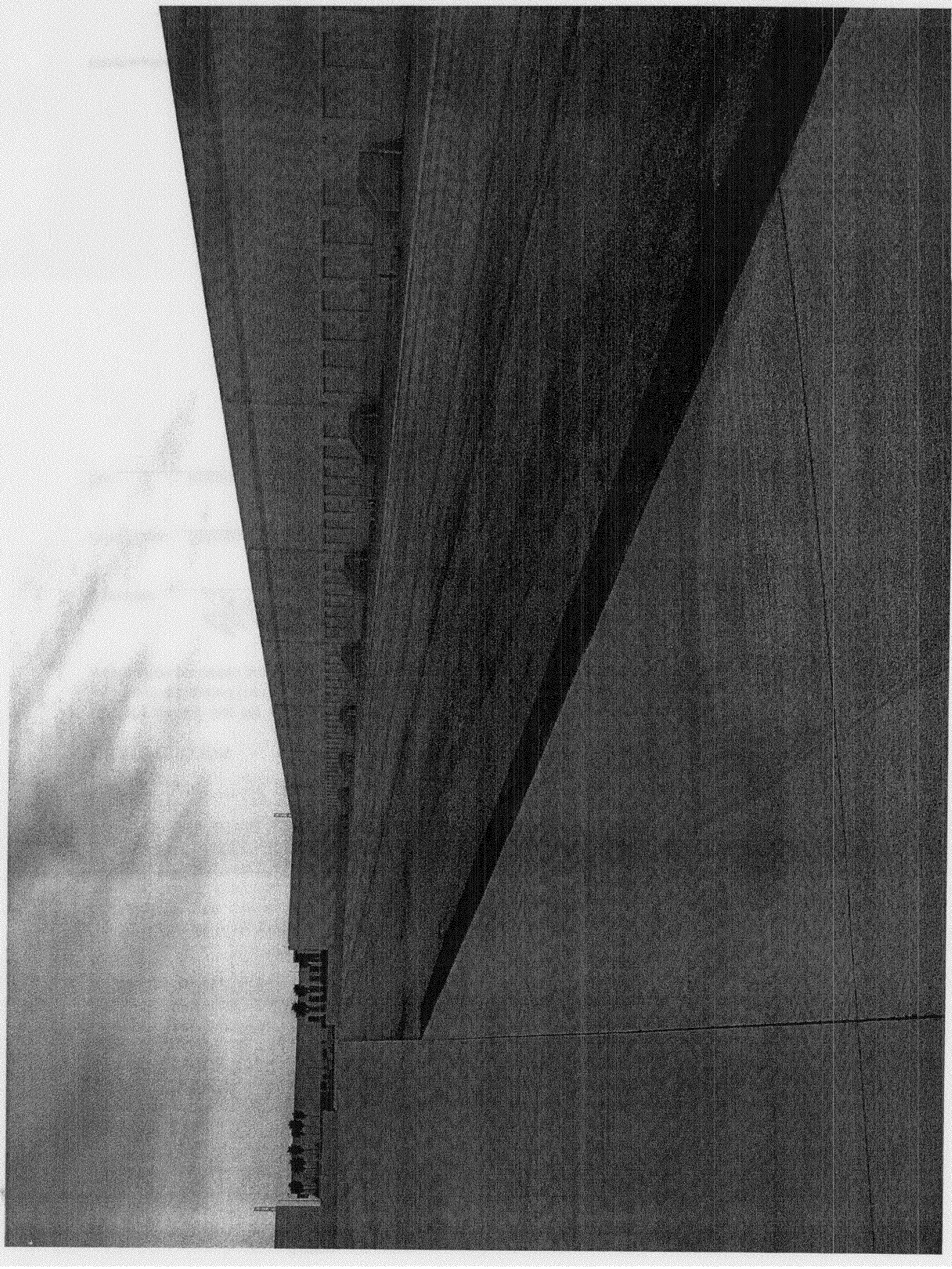
CERTIFICATION

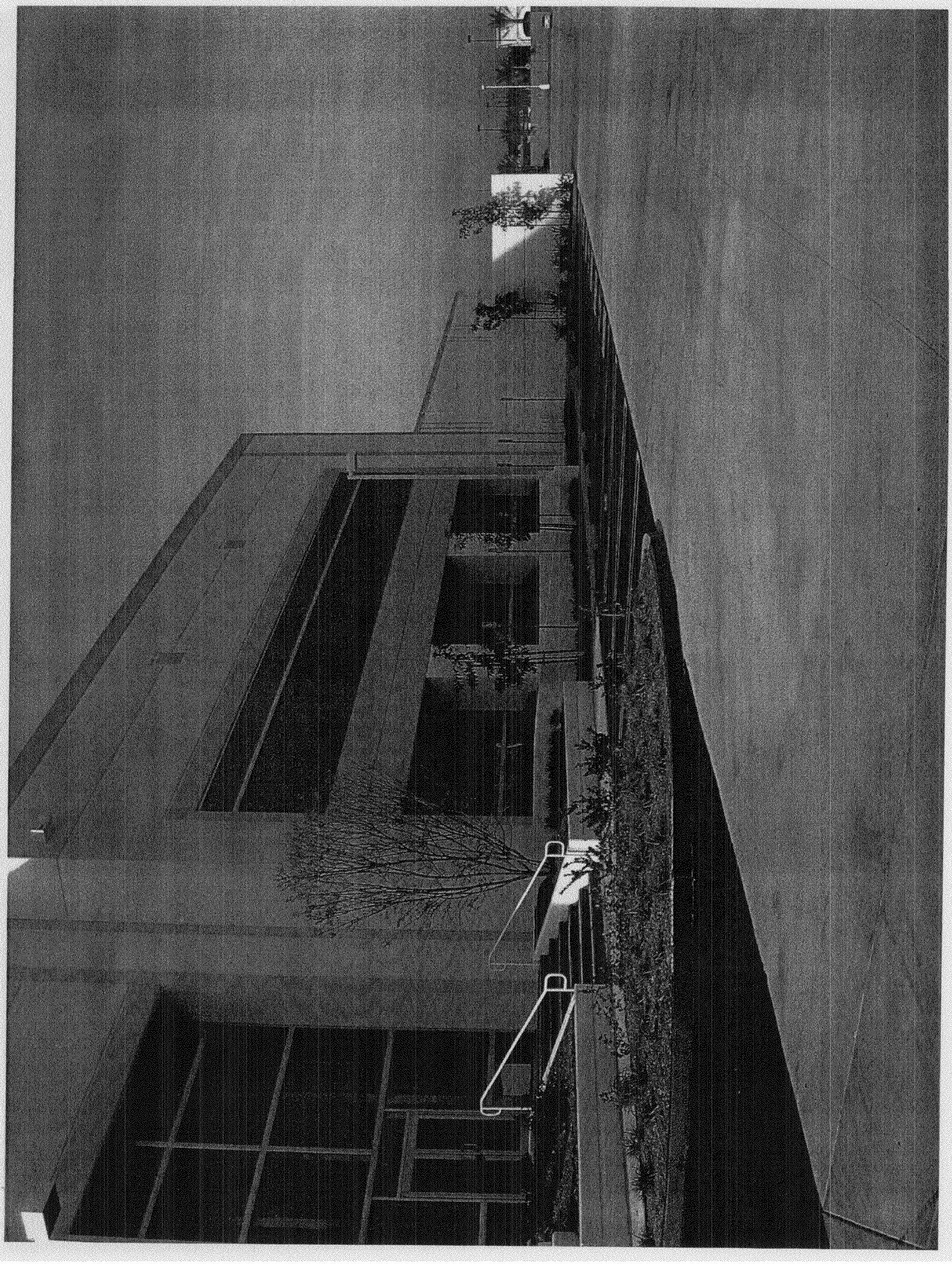
I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature _____ Date April 3, 2007

Print Name Salvatore M. Stavale

For Boeing Realty Corporation





LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

Initial Study - Part 2

ENVIRONMENTAL CHECKLIST FORM

Project title:	Biorecirculation Pilot Study Boeing Realty Corporation Former C-6 Facility Los Angeles, California
Lead agency name and address:	California Regional Water Quality Control Board Los Angeles Region 320 West 4th Street, Suite 200 Los Angeles, California 90013
Contact person and phone number:	Ana Townsend (213) 576-6600
Project location:	19503 South Normandie Avenue Los Angeles, California
Project sponsor's name and address:	Robert Scott Boeing Realty Corporation 4501 Conant Street Long Beach, California 90808 (562) 497-6176
General plan designation:	Biorecirculation Pilot Study Boeing Realty Corporation Former C-6 Facility Los Angeles, California
Zoning:	Commercial/Industrial
Description of project:	Under the oversight of the Regional Board, Boeing Realty Corporation (Boeing) is investigating and remediating soil and groundwater impacts at the 170-acre Former C-6 Facility. Boeing proposes to implement semi-continuous injections of an electron donor amendment and bioaugmentation culture with groundwater extraction to remediate the former Building 1/36 source area. This approach is referred to as Biorecirculation. The pilot test study is proposed to be conducted by the following: 1) continuous groundwater extraction from the B-Sand from well EWB001; 2) conveyance of the extracted water to the remediation compound in the northeast corner of the Building 1/36 area; 3) continuous re-injection of groundwater into the B-Sand using a limited subset of existing amendment wells via existing conveyance; and 4) periodic pulsed addition of electron donor solution and one or two-time addition of bioaugmentation cultures into the extracted water prior to re-injection. The electron donors and bioaugmentation cultures being evaluated

during the pilot test study includes: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, Newman Zone, Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. It is anticipated that the extracted water will be amended with the electron donor for approximately 5% to 50% of the operational time. A tracer such as bromide may be added to the re-injected groundwater in order to improve understanding of the local hydraulics. If a tracer test is performed, monitoring for the tracer will be performed. The periodic/pulsed injection of electron donor is expected to minimize the potential for biofouling. However, if necessary, low concentrations of biofouling control chemicals which are routinely used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance.

Boeing may elect to continue and/or expand the biorecirculation study across the entire Building 1/36 area using a combination of existing injection well network and new infrastructure. Prior to continuing or expanding the study, the Discharger will submit a Work Plan Addendum for the Regional Board approval.

Boeing may also elect to continue periodic slug injections or initiate biorecirculation as part of additional pilot study at Building 2 area of the Site using a combination of existing injection well network and new infrastructure. Limited slug amendment injections were conducted in this area in 2004 under a Regional Board Order No. R4-2002-0030 "General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites" (General WDR). Prior to implementing any such additional injections, the Discharger will submit a Work Plan Addendum for the Regional Board approval. If conducted, it is anticipated that one or more of the following electron donors/carbon sources will be used: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, and Newman Zone; and one of the following bioaugmentation cultures will be used: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. With the exception of the JRW proprietary fermentation mother liquor and citrate, the rest of the electron donors/carbon sources are approved for use under the General WDR. This Site-Specific WDR will cover the use of all of the above-mentioned electron donors/carbon sources; therefore, once this permit is adopted, a letter rescinding the General WDR will be issued.

It is anticipated that the one or more of the electron donors/carbon sources will be mixed with groundwater (if biorecirculation is conducted) or potable water (for slug injections) for injection into the existing wells. A tracer such as

	bromide may be added to the injected water in order to improve understanding of the local hydraulics. If a tracer test is performed, monitoring for the tracer will be performed. If necessary, low concentrations of biofouling control chemicals which are routinely used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance to address biofouling
Surrounding land uses and setting (briefly describe the project's surroundings):	The Facility was redeveloped and is currently used for commercial warehousing operations. The Facility comprises approximately 170 acres and is bounded by: 190th Street to the north; Normandie Avenue and the Del Amo Superfund site to the east; Montrose Chemical Superfund site, Jones Chemical and Stauffer Chemical to the south; and the former International Light Metals site to the west.
Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):	City of Los Angeles Department of Building and Safety for electrical permits. County of Los Angeles for Well Installation Permits

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☒ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION

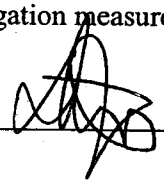
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

[X] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all the potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

5-8-07

Date

DEBORAH J. SMITH, Interim Executive Officer
Printed Name

Los Angeles Regional Water Quality Control Board

EVALUATION OF ENVIRONMENTAL IMPACTS

Potential environmental impacts associated with the proposed project are provided below in a checklist format developed pursuant to the California Environmental Quality Act (CEQA) Guidelines. The checklist has been used to assess the significance or insignificance of each potential impact. Brief explanations of each conclusion are provided after the checklists. Mitigation measures, as required, are discussed below each checklist.

Impact classifications used in the checklist are defined as follows:

"Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

"Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from **"Potentially Significant Impact"** to a **"Less Than Significant Impact."** The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

"Less Than Significant Impact" applies to an effect that would not be significantly adverse.

"No Impact" applies where the effect occurs without impact.

I. AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

The proposed project is located at a commercial facility.

Mitigation Measures

The proposed project would not result in any impacts to aesthetic resources, therefore no mitigation is required.

II. AGRICULTURAL RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

The proposed project location is not within existing zoning for agricultural purposes.

Mitigation Measures

The proposed project would not result in any impacts to agricultural resources. Therefore, no mitigation is required.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X

The proposed project would not result in any impacts to air quality.

Mitigation Measures

The proposed project would not result in any impacts to air quality, therefore no mitigation is required.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

The proposed project would not result in any impact to biological resources.

Mitigation Measures

The proposed project would not result in any impact to biological resources, therefore no mitigation is required.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to §15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

There are no known historic, archaeological, paleontological or unique geologic resources that exist at the proposed site.

Mitigation Measures

The proposed project would not result in any impacts to cultural resources, therefore no mitigation is required.

VI. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (ii) Strong seismic ground shaking? (iii) Seismic-related ground failure, including liquefaction? (iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks of life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				X

The proposed project would not result in any geologic or soil impacts.

Mitigation Measures

The proposed project would not result in any geologic or soil impacts, therefore no mitigation is required.

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

The proposed project would not result in any hazards or hazardous materials impacts associated with the public.

Mitigation Measures

The proposed project would not result in any hazards or hazardous materials impacts associated with the public, therefore no mitigation is required.

VIII. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially degrade groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or surface runoff in a manner which would result in flooding on- or offsite?				X
e) Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

Biorecirculation or slug injections will increase the biomass throughout the aquifer, achieving effective biodegradation of dissolved and sorbed contaminants. The addition of mentioned electron donors into the aquifer will stimulate the growth of a bacteria ultimately resulting in reductive dechlorination of chlorinated volatile organic compounds (VOCs) and improve groundwater quality within and

downgradient of the treatment area. After monitoring data indicates that the aquifer conditions are suitable (i.e., sulfate-reducing), then bioaugmentation will be performed by adding a bacterial culture (i.e., Shaw's SDC-9™ or SiREM's KB-1™) to the re-injected water (one or two time addition), which will further degrade the VOCs into harmless byproducts. The periodic/pulsed injection of electron donor is expected to minimize the potential for biofouling. However, if necessary, low concentrations of biofouling control chemicals which used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance

Mitigation Measures

The proposed project will be conducted pursuant to:

1. Remedial action plans approved by the Executive Officer:

   "Building 1/36 (Parcel C) Source-Area Groundwater In-Situ Reactive Zone Pilot Test Work Plan" dated May 10, 2002, prepared by Arcadis G&M, Inc. Approved on October 29, 2002.

   "Addendum to the Building 1/36 (Parcel C) Source-Area Groundwater In-Situ Reactive Zone Pilot Test Work Plan" dated February 1, 2007, prepared by CDM. Approved on April 3, 2007.

2. Site-Specific Waste Discharge Requirements Order No. R4-2007-XXXX for the addition of electron donor solution and bioaugmentation cultures, and Monitoring and Reporting Program No. CI XXXX to be considered for adoption on July 12, 2007.

A groundwater sampling and analysis program will be conducted prior to, during, and post addition to closely monitor groundwater effects. Groundwater monitoring will be conducted from up to14 existing site groundwater monitoring wells and any additional wells deemed necessary to monitor performance within the respective treatment areas. Analysis will include (1) field parameters (e.g., temperature, conductivity, DO, turbidity, and ORP), (2) VOCs, (3) electron donor parameters (e.g., chemical oxygen demand [COD] or total organic carbon [TOC]), (4) redox sensitive parameters (e.g., ferrous iron, sulfate, nitrate, and methane), (5) bioactivity parameters (e.g., alkalinity and pH), and (6) bacterial DNA analysis by Quantitative Polymerase Chain Reaction test (qPCR) to identify the amount of indigenous *dehalococcoides spp.* strains.

Progressive changes in local groundwater quality will occur over a relatively short period of time, leading to an overall groundwater quality improvement. The bacterial population added to ensure complete reduction of TCE daughter products will only grow in the area where amendments (food source) are added. The spread of the bacterial population will be limited to anaerobic areas near and around the amendment injection points during and from a period of time after amendment addition, and will be controlled by areas where the groundwater system is aerobic.

Control measures would be implemented if electron donor/carbon source amendment and Dehalococcoides ethenogenes (DHE) associated with the bioaugmentation culture were detected in monitoring points outside the treatment zone. These measures would involve stopping further addition of amendments to the groundwater. After this control measure has been implemented the remaining amendments in the groundwater will naturally break down, effectively removing food source and allowing the groundwater system to return to more aerobic conditions. The bioaugmentation culture (Shaw's SDC-9™ culture or SiREM's KB-1™ culture) requires an electron donor/carbon source amendment (food), VOCs, and anaerobic conditions to survive. Given these growth requirements, the bioaugmentation culture will not survive due to the loss of the food source and anaerobic conditions.

If the above mentioned control measure does not prevent the offsite migration of the electron donors/carbon sources and/or the bioaugmentation cultures, a contingency plan, involving the installation of a hydraulic containment system, will be implemented. The slow rate of groundwater flow within and down gradient of the pilot study areas allows for sufficient time to complete design, installation, and implementation of a hydraulic containment system if necessary.

IX. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

The proposed project would not result in any impacts to land use and planning.

Mitigation Measures

The proposed project would not result in any impacts to land use and planning, therefore no mitigation is required.

X. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

The project site has no known mineral resources.

Mitigation Measures

The proposed project would not result in any impacts to mineral resources, therefore no mitigation is required.

XI. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Noise levels will be similar to those of the existing operation. This project is not located in an area that has noise levels in excess of standards from air operations.

Mitigation Measures

The proposed project would not result in any significant noise impacts, therefore no mitigation is required.

XII. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or directly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Population growth will not be affected and displacement of housing or people will not occur.

Mitigation Measures

The proposed project would not result in any impacts to population or housing, therefore no mitigation is required.

XIII. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

The proposed project would not result in any impacts to public services.

Mitigation Measures

The proposed project would not result in any impacts to public services, therefore no mitigation is required.

XIV. RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

The proposed project will not result in any recreation impacts.

Mitigation Measures

The proposed project will not result in any recreation impacts, therefore no mitigation is required.

XV. TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in the traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

The proposed facility is not expected to create a significant load to the existing surface street.

Mitigation Measures

The proposed project would not result in any significant transportation or traffic impacts, therefore no mitigation is required.

XVI. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

The proposed project would not result in any impacts related to utilities or service systems.

Mitigation Measures

The proposed project would not result in any impacts related to utilities or service systems, therefore no mitigation is required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)				X
c) Does the project have environmental effects which will cause substantially adverse effects on human beings, either directly or indirectly?				X

As discussed throughout this document and with the implementation of the RWQCB-approved source area remediation plans, the General Waste Discharge Requirements, and the Site-Specific Waste Discharge Requirements, the proposed project would not result in any significant impacts to the quality of the environment, nor would it substantially affect biological resources and associated habitats or eliminate important examples of California history or prehistory.

The proposed project would not result in significant cumulative impacts.

As indicated in this document, the proposed project is expected to result in positive benefits of improving groundwater quality.

FISH AND GAME COMMISSION
CALIFORNIA DEPARTMENT OF FISH AND GAME
CERTIFICATE OF FEE EXEMPTION

De Minimis Impact Finding

Project Title: *Remediation of Volatile Organic Compounds in Groundwater by Enhanced In-Situ Bioremediation with Bioaugmentation, Boeing Realty Corporation, Former C-6 Facility, Los Angeles, California*

Project Location (within Los Angeles County): 19503 South Normandie Avenue, Los Angeles, CA

Project Description: The Boeing Realty Corporation (Discharger) proposes to implement semi-continuous injections of an electron donor amendment and bioaugmentation culture, which involves the addition of selected non-pathogenic (naturally derived, not genetically engineered) chlorinated ethene-degrading Dehalococcoides ethenogenes culture (referred to as Shaw's SDC-9™ culture, or SiREM's KB-1™) in select areas to facilitate reductive dechlorination of chlorinated volatile organic compounds (VOCs), with groundwater extraction to remediate the former Building 1/36 source area. This approach is referred to as Biorecirculation. The pilot test study is proposed to be conducted by the following: 1) continuous groundwater extraction from the B-Sand from well EWB001; 2) conveyance of the extracted water to the remediation compound in the northeast corner of the Building 1/36 area; 3) continuous re-injection of groundwater into the B-Sand using a limited subset of existing amendment wells via existing conveyance; and 4) periodic pulsed addition of electron donor solution and one or two-time addition of bioaugmentation cultures into the extracted water prior to re-injection. The electron donors and bioaugmentation cultures being evaluated during the pilot test study includes: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, Newman Zone, Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. It is anticipated that the extracted water will be amended with the electron donor for approximately 5% to 50% of the operational time. A tracer such as bromide may be added to the re-injected groundwater in order to improve understanding of the local hydraulics. If a tracer test is performed, monitoring for the tracer will be performed. The periodic/pulsed injection of electron donor is expected to minimize the potential for biofouling. However, if necessary, low concentrations of biofouling control chemicals which are routinely used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance.

The Discharger may elect to continue and/or expand the biorecirculation study across the entire Building 1/36 area using a combination of existing injection well network and new infrastructure. Prior to continuing or expanding the study, the Discharger will submit a Work Plan Addendum for the Regional Board approval. Boeing may also elect to continue periodic slug injections or initiate biorecirculation as part of additional pilot study at Building 2 area of the Site using a combination of existing injection well network and new infrastructure. Limited slug amendment injections were conducted in this area in 2004 under Regional Board Order No. R4-2002-0030 "General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites" (General WDR). Prior to implementing any such additional injections, the Discharger will submit a Work Plan Addendum for the Regional Board approval. If conducted, it is anticipated that one or more of the following electron donors/carbon sources will be used: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, and Newman Zone; and one of the following bioaugmentation cultures will be used: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. With the exception of the JRW proprietary fermentation mother liquor and citrate, the rest of the electron donors/carbon sources are approved for use under the General WDR. This Site-Specific WDR will cover the use of all of the above-mentioned electron donors/carbon sources; therefore, once this permit is adopted, a letter rescinding the General WDR will be issued.

In accordance with the California Environmental Quality Act (CEQA), this Regional Board has prepared an Initial Study for the remediation of VOCs in shallow groundwater by the addition of electron donors with chlorinated-ethene degrading consortium, referred to as SDC-9™ or KB-1™, into shallow groundwater to facilitate the bioremediation of VOCs.

Findings of Exemption:

In accordance with Section 753.5(c) of the Fish and Game Code, this Regional Board, acting as Lead Agency, has conducted an Initial Study and, considering the record for the proposed project as a whole, has determined that there is no evidence that the project will involve potential for adverse effects, either individually or cumulatively, on wildlife or wildlife resources. Consequently, a "de minimis" finding is warranted and no fee is required. In addition, on the basis of substantial evidence in the record, this Regional Board (acting as Lead Agency) rebuts the presumption of adverse effect contained in the Fish and Game Code as it relates to the proposed project.

Certification:

I hereby certify that the lead agency has made the above findings of fact and that based upon the initial study and bearing record the project will not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section 711.2 of the Fish and Game Code.

Deborah J. Smith
Interim Executive Officer

5-8-07
Date

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

RESOLUTION NO. R04-2007-XXXX

APPROVING THE ENVIRONMENTAL CHECKLIST AND
ADOPTING A MITIGATED NEGATIVE DECLARATION FOR
PILOT STUDY TO EVALUATE IN-SITU BIORECIRCULATION OF VOLATILE ORGANIC COMPOUNDS IN SHALLOW GROUNDWATER, BOEING REALTY CORPORATION,
FORMER C-6 FACILITY, LOS ANGELES, CALIFORNIA
(FILE NO. 95-036)

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region finds that:

TENTATIVE

1. California Water Code (CWC) section 13260(a)(1) requires that any person discharging wastes, or proposing to discharge wastes other than into a community wastewater collection system, which could affect the quality of the waters of the State, shall file a report of waste discharge (ROWD) with the Regional Water Quality Control Board (Regional Board) exercising jurisdiction in the area, and that Regional Board shall then prescribe requirements for the discharge or proposed discharge of wastes.

2. Boeing Realty Corporation (Discharger) previously owned the Site located at 19503 South Normandie Avenue in Los Angeles, Los Angeles County, California. For redevelopment purposes, the Site was divided into four parcels (A, B, C, and D). The Site comprises approximately 170 acres and is bounded by: 190th Street to the north; Normandie Avenue and the Del Amo Superfund site to the east; Montrose Chemical Superfund site, Jones Chemical and Stauffer Chemical to the south; and the former International Light Metals site to the west. The Site was formerly used between approximately 1952 and 1992 by Douglas Aircraft Company and McDonnell Douglas Company for aerospace manufacturing operations. In 1992, most of the manufacturing operations ceased and a limited amount of warehousing and assembly continued until the mid-1990s. The buildings at the Site have been demolished and the property has been sold and redeveloped, with the exception of Lot 8 of Parcel C which is still owned by the Discharger. The Site is currently used for commercial/light industrial purposes.

3. Soil and groundwater beneath the Site is contaminated with volatile organic compounds (VOCs) including trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), chloroform, methyl ethyl ketone (MEK [2-butanone]), toluene, and 1,1,1-trichloroethane (1,1,1-TCA).

4. The Discharger proposes to conduct a pilot study to be conducted to verify the effectiveness of Biorecirculation to reduce VOC concentrations and mass within the Bellflower Aquitard beneath the Building 1/36 area of the Site. The pilot study is proposed to be conducted by the following: 1) continuous groundwater extraction from the B-Sand from well EWB001; 2) conveyance of the extracted water to the remediation compound in the northeast corner of the Building 1/36 area; 3) continuous re-injection of groundwater into the B-Sand using a limited subset of existing amendment wells via existing conveyance; and 4) periodic pulsed addition of electron donor solution and one or two-time addition of bioaugmentation cultures into the extracted water prior to re-injection. The electron donors and bioaugmentation cultures being evaluated during the pilot study includes: whey powder, citrate (either as citric acid or sodium

citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, Newman Zone, Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. It is anticipated that the extracted water will be amended with the electron donor for approximately 5% to 50% of the operational time. A tracer such as bromide may be added to the re-injected groundwater in order to improve understanding of the local hydraulics. If a tracer test is performed, monitoring for the tracer will be performed. The periodic/pulsed injection of electron donor is expected to minimize the potential for biofouling. However, if necessary, low concentrations of biofouling control chemicals which are used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance.

5. Details of the pilot study and methods are included in the addendum to the pilot test work plan, "Addendum to Building 1/36 (Parcel C) Source-Area Groundwater In-Situ Reactive Zone Pilot Test Workplan," dated February 1, 2007, prepared by Camp Dresser McKee, Inc. and approved by this Regional Board on April 3, 2007.

6. The Discharger may elect to continue and/or expand the biorecirculation study across the entire Building 1/36 area using a combination of existing injection well network and new infrastructure. Prior to continuing or expanding the study, the Discharger will submit another Addendum to the Arcadis Work Plan for the Regional Board approval.

7. The Discharger may also elect to continue periodic slug injections or initiate biorecirculation as part of additional pilot study at Building 2 area of the Site using a combination of existing injection well network and new infrastructure. Limited slug amendment injections were conducted in this area in 2004 under a Regional Board Order No. R4-2002-0030 "General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites" (General WDR), Monitoring and Reporting Program CI-8494 and in accordance with documents titled "Building 2 In-Situ Reactive Zone Pilot Test Workplan" (Arcadis Building 2 Work Plan, dated August 15, 2001) and "Addendum to the Building 2 In-Situ Reactive Zone Pilot Test Work Plan" (Addendum, dated July 31, 2002). Prior to implementing any such additional injections, the Discharger will submit an Addendum to the Arcadis Building 2 Work Plan for the Regional Board approval. If conducted, it is anticipated that one or more of the following electron donors/carbon sources will be used: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, and Newman Zone; and one of the following bioaugmentation cultures will be used: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture.

8. With the exception of the JRW proprietary fermentation mother liquor and citrate, the rest of the electron donors/carbon sources are approved for use under the General WDR. The Discharger has filed a Report of Waste Discharge and applied for Site-Specific Waste Discharge Requirements (WDR) to add JRW proprietary fermentation mother liquor, and Newman Zone; and one of the following bioaugmentation cultures: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture at this Facility. This Site-Specific WDR will cover the use of all of the above-mentioned electron donors/carbon sources currently covered under the existing General WDR; therefore, once this permit is adopted, a letter rescinding the General WDR will be issued.

TENTATIVE

It is anticipated that one or more of the electron donors/carbon sources will be mixed with groundwater (if biorecirculation is conducted) or potable water (for slug injections) for injection into the existing wells. A tracer such as bromide may be added to the injected water in order to improve understanding of the local hydraulics. If a tracer test is performed, monitoring for the tracer will be performed. If necessary, low concentrations of biofouling control chemicals which are routinely used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance to address biofouling.

9. Groundwater beneath the Site is unconfined and the direction of flow varies across the Site but is generally toward the south. The Discharger shall monitor for the presence and concentration of injection solution and contaminants and evaluate flow conditions and any potential for migration of contaminants outside the treatment area. As specified in the Waste Discharge Requirements and Notice of Preparation of Mitigated Negative Declaration, the Discharger will provide hydraulic control, if necessary, to prevent offsite migration. Monitoring of groundwater quality and flow conditions across the entire Site is required by a comprehensive separate Site-wide groundwater monitoring program.

10. The application of electron donor amendment and bioaugmentation cultures to groundwater may result in temporary adverse impacts to groundwater quality, but impacts that may result will be localized, and of short-term duration, and will not impact any existing or prospective uses of groundwater.

11. The Water Quality Control Plan (Basin Plan) for the Los Angeles Region designates the beneficial uses of groundwater in the Central Basin for municipal and domestic supply, industrial process supply, industrial service supply, and agricultural supply.

12. The permitted discharge is consistent with the anti-degradation provisions of State Water Resources Control Board Resolution No. 68-16 (Anti-degradation Policy). The discharge may result in some localized exceedance of background concentrations of constituents such as total organic carbon, VOCs, and total dissolved solids (TDS), but this is not anticipated to result in any long-term groundwater degradation.

13. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations. The Regional Board, in a public meeting on July 12, 2007, heard and considered all comments pertaining to the discharge and to the tentative requirements.

14. This Regional Board has assumed lead agency role for this project under the California Environmental Quality Act (Public Resources Code section 21000 et seq.) and has conducted an Initial Study (in the format of an expanded Environmental Checklist) in accordance with Title 14, California Code of Regulations, section 15063, titled Guidelines for Implementation of the California Environmental Quality Act. Based on the Initial Study, Regional Board prepared a Mitigated Negative Declaration that the project will not have a significant adverse effect on the environment.

15. Copies of the Environmental Checklist and proposed Mitigated Negative Declaration were transmitted to the State Clearing House, all agencies and interested parties. All comments

TENTATIVE

received have been addressed by Regional Board staff. The Regional Board considered all testimony and evidence at a public hearing held on July 12, 2007, at the Metropolitan Water District of Southern California, Board Room, 700 North Alameda, Los Angeles, California, and good cause was found to approve the Environmental Checklist and adopt a Mitigated Negative Declaration.

16. The Regional Board has reviewed the Initial Study and Mitigated Negative Declaration concerning this Resolution prepared by staff in compliance with the California Environmental Quality Act (Public Resources Code section 21000 et seq.). The Regional Board concurs with the staff findings that a Mitigated Negative Declaration should be adopted. The Initial Study and Mitigated Negative Declaration were circulated for public review and comment.

THEREFORE, BE IT RESOLVED that the Regional Board:

1. Adopts the Environmental Checklist, Initial Study and Mitigated Negative Declaration and directs the Executive Officer to file a Notice of Determination with the State Clearinghouse within 30 days as required by the California Code of Regulations.

2. Directs that a copy of this Resolution shall be forwarded to the State Water Resources Control Board and all interested parties.

3. Directs that the discharge of amendments and microorganisms into the soil and groundwater shall conform with all the requirements, conditions, and provisions set forth in *A. "Discharge Limits" and B. "Discharge Specifications"* of the ORDER NO. R4-2007-XXXX.

CERTIFICATION

I, Deborah J. Smith, Interim Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region on July 12, 2007.

_____ _____

Deborah J. Smith
Interim Executive Officer

Date

TENTATIVE

California Regional Water Quality Control Board

Los Angeles Region

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

Linda S. Adams
Agency Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: http://www.waterboards.ca.gov/losangeles

Arnold Schwarzenegger
Governor

May 7, 2007

Mr. Robert Scott
Boeing Realty Corporation
4501 Conant Street
Long Beach, CA 90808

TENTATIVE WASTE DISCHARGE REQUIREMENTS FOR PILOT TESTS TO EVALUATE BIOREMEDIATION OF VOLATILE ORGANIC COMPOUNDS (VOCS) IN GROUNDWATER, BOEING REALTY CORPORATION, FORMER C-6 FACILITY, 19503 SOUTH NORMANDIE, LOS ANGELES, CALIFORNIA (FILE NO. 95-036; SLIC NO. 410; SITE ID NO. 1846000)

Dear Mr. Scott:

We have completed our review of your application for permit to discharge waste for groundwater remediation using electron donors with chlorinated-ethene degrading consortium, referred to as SDC-9™ or KB-1™.

Pursuant to the California Water Code, tentative waste discharge requirements have been prepared.

Enclosed are copies of the following:

Tentative Requirements, consisting of:

1. Board Resolution;
2. Board Order;
3. Monitoring and Reporting Program; and
4. Standard Provisions Applicable to Waste Discharge Requirements.*

In accordance with administrative procedures, this Board at a public hearing to be held on July 12, 2007, at 9:00 a.m., Metropolitan Water District of Southern California, Board Room, Los Angeles, Located at 700 North Alameda, Los Angeles, California, will consider the enclosed tentative requirements and comments submitted in writing regarding any and all portions thereof. The Board will hear any testimony pertinent to this discharge and the tentative requirements. Is expected that the Board will take action at the hearing; however, as testimony indicates, the Board, at its discretion, may order further investigation.

Written comments regarding this tentative Order must be received at the Regional Board office by the close of business on June 11, 2007, in order to be evaluated by Board staff and included in the Board's agenda folder. Comments received after that date will be provided, ex agenda, to the Board for their consideration. Timely submittal of written comments is encouraged to ensure that all comments are

* These documents have previously been sent to all persons on the mailing list. To save printing and postage costs, these items are now sent only to the adressee, however, anyone may obtain copies by contacting the Board staff listed below.

accurately and fully included in the administrative record, that Board staff is able to provide timely review, and that Regional Board members have sufficient time to give full consideration to the comments and issues raised. Comments received after the requested date may result in delay in consideration of the tentative Order.

If you have any questions, please contact Ms. Ana Townsend at (213) 576-6738 or Ms. Su Han at (213) 576-6735.

Sincerely,

Su Han, PG, CHG
Senior Engineering Geologist
Chief of Site Cleanup Unit I

Enclosures

1. Board Resolution;
2. Board Order;
3. Monitoring and Reporting Program; and
4. Standard Provisions Applicable to Waste Discharge Requirements.*

cc: United States Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
Jeffrey Dhont, United States Environmental Protection Agency, Region 9
John Youngerman, State Water Resources Control Board, Division of Water Quality
Department of Fish and Game, Region 5
Kurt Souza, State Department of Health Services, Drinking Water Field Operations Branch
Tom Cota, Department of Toxic Substances Control, Cypress
Brian Hooper, Los Angeles County Department of Public Works, Waste Management Division
Carl G. Brooks, South Coast Air Quality Management District
Ted Johnson, Water Replenishment District of Southern California
Cheryl Ross, West Basin Municipal Water District
Mark Stuart – Central Basin, California Department of Water Resources
National Resources Defense Council
Los Angeles County Department of Health Services, Environmental Health
Alex P. Carlos, Regional Water Quality Control Board, Region 4
Ravi Subramanian, CDM
Joseph Weidmann, Haley & Aldrich

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-2007-xxxx

WASTE DISCHARGE REQUIREMENTS
FOR
BOEING REALTY CORPORATION
PILOT STUDY TO EVALUATE IN-SITU BIORECIRCULATION OF
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
FORMER C-6 FACILITY

(FILE NO. 95-036)

The California Regional Water Quality Control Board, Los Angeles Region, (hereafter Regional Board) herein finds that:

TENTATIVE

1. Boeing Realty Corporation (hereafter Discharger) has filed a Report of Waste Discharge and applied for Waste Discharge Requirements to conduct a biorecirculation pilot study to bioremediate chlorinated volatile organic compounds (VOCs) in shallow groundwater at the Former C-6 Facility (Site) identified below.

2. The Discharger previously owned the Site located at 19503 South Normandie Avenue in Los Angeles, Los Angeles County, California (Latitude 33° 51'16" North, Longitude 118° 18'02" West, see Figure 1). For redevelopment purposes, the Site was divided into four parcels (A, B, C, and D). The Site comprises approximately 170 acres and is bounded by: 190th Street to the north; Normandie Avenue and the Del Amo Superfund site to the east; Montrose Chemical Superfund site, Jones Chemical and Stauffer Chemical to the south; and the former International Light Metals site to the west. The Site was formerly used between approximately 1952 and 1992 by Douglas Aircraft Company and McDonnell Douglas Company for aerospace manufacturing operations. In 1992, most of the manufacturing operations ceased and a limited amount of warehousing and assembly continued until the mid-1990s. The buildings at the Site have been demolished and the property has been sold and redeveloped, with the exception of Lot 8 of Parcel C which is still owned by the Discharger. The Site is currently used for commercial/light industrial purposes.

3. Shallow groundwater beneath the Site is first encountered at depths ranging from approximately 55 to 70 feet below ground surface. Shallow groundwater is unconfined and occurs within the Bellflower Aquitard. The Gage Aquifer is present beneath the Bellflower Aquitard. The Bellflower Aquitard comprises the upper portion of the Lakewood Formation and generally occurs from land surface to depths of approximately 125 to 145 feet beneath the Site and appears to be laterally continuous across the Site. The Bellflower Aquitard is comprised primarily of a heterogeneous mixture of low permeability silts and clays, with lenses and layers of sandy or gravelly clay, silty sand, and sand identified in some areas. The Bellflower Aquitard is known to have relatively low hydraulic conductivities and regional groundwater supply wells are not screened in and do not produce from this unit. The upper 20 to 60 feet of the upper Bellflower below the Site consists of fine-grained soils (predominantly fine sands, silts, and clays) which thicken to the east. A sandy zone (Middle Bellflower Sand) that dips downward to the east underlies the fine-grained soils. The Middle Bellflower Sand is generally 60 to 100 feet thick and is a massive, light yellowish brown, fine to medium sand with discontinuous layers of fine-grained sediment (local silt and clay zones) that also dip downward to the east. A fine-grained silt and clay layer, referred to as the Middle Bellflower Mud (MBFM), locally interrupts this sand. Where divided, the top sand subunits are referred to as the B-Sand; and the bottom sand subunits as the C-Sand. The MBFM is discontinuous across the Site and is comprised of laminated silts, laminated clays, and very fine sands. Thickness of the

MBFM, wherever present, ranges from approximately 1 foot to 13 feet. The MBFM thins towards the north and appears to be absent in the northern portion of the Site (most of the former Building 1/36 portion of the Site)

4. The Discharger has conducted numerous phases of soil and groundwater investigations related to Site operations since the mid-1980s. The Discharger submitted soil and groundwater investigation reports to this Regional Board. The investigations consisted of drilling more than 1,500 soil borings, collecting and analyzing over 8,000 soil samples, collecting and analyzing 169 soil gas samples, installing 87 groundwater monitoring wells, installing 44 hydropunch groundwater sampling points, and collecting and analyzing over 900 groundwater samples.

5. The Site-wide investigations show that the primary contaminants detected in soil and groundwater are trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), chloroform, methyl ethyl ketone (MEK [2-butanone]), toluene, and 1,1,1-trichloroethane (1,1,1-TCA). The primary VOCs in the Building 1/36 area include trichloroethene (TCE), 1,1,-DCE, MEK [2-butanone], toluene, and 1,1,1-TCA. Based on the most recent round of annual groundwater monitoring conducted in March 2006, concentrations of VOCs in groundwater in the Building 1/36 area monitoring wells range from non-detect up to 4,100 micrograms per liter (µg/l) TCE, up to 12,000 µg/l 1,1-DCE, up to 210,000 µg/l MEK, up to 230 µg/l 1,1,1-TCA, and up to 9,900 µg/l toluene. A map showing TCE plumes in the Former Bldg 1/36 groundwater is attached as Figure 2.

6. The Discharger has implemented various soil and groundwater remedial programs. In 2000-2001, a Phase II soil investigation and soil remediation program was conducted at the Site, primarily for Parcel C, by Haley & Aldrich, Inc., to investigate and remediate identified Environmental Features (EFs) at the Site. The assessment program identified 34 locations with elevated concentrations of VOCs, petroleum hydrocarbons, semivolatile organic compounds, and/or metals in the shallow soil. Soil from these 34 locations were excavated and removed. Upon completion of the shallow soil remediation program, a total of 14,200 cubic yards of soil had been excavated and disposed of off-site at one of the following facilities: Bradley Landfill in Los Angeles, California, TPS Technologies in Adelanto, California, or ChemWaste Management in Kettleman, California. During this investigation and remediation program, two deep soil impacts (Building 1/36 and Building 2 areas) were identified on Parcel C. The Regional Board issued an unrestricted no further action for the shallow soil (0 to 12 feet below ground surface) for Parcel C on December 6, 2002.

7. The Discharger installed two soil vapor extraction remediation systems (VES): one at the Building 1/36 area and one at the Building 2 area to reduce the concentration and mass of VOCs in the deep soil (greater than 12 feet bgs). The Discharger submitted a "Soil Vapor Extraction Pilot Test Work Plan" for the Building 2 area (Building 2 VES Work Plan) prepared by Haley & Aldrich. The Regional Board approved the Building 2 VES Work Plan in a letter dated October 9, 2001. Operation of the Building 2 VES removed approximately 2,950 pounds of VOCs from deep soils and VOC concentrations decreased significantly during VES operation (as reported in confirmation soil samples). The Regional Board issued a no further action for the deep soil (12 to 60 feet below ground surface) at the Building 2 area on April 2, 2003. The Discharger submitted an "Interim Action Soil Vapor Extraction Work Plan" for the Building 1/36 area (Building 1/36 VES Work Plan) prepared by Haley & Aldrich. The Regional Board approved the Building 1/36 VES Work Plan in a letter dated November 16, 2001. Operation of the Building 1/36 VES removed approximately 33,276 pounds of VOCs from deep soils to date. The Building 1/36 VES is currently operating at the Site.

TENTATIVE

8. Within one mile of the Site, there is one active water supply well (Well 3S14W25P04) located approximately one mile north of the Site (Figure 3). This well is owned by California Water Service Company. Available well construction information indicates that this well is screened in the Silverado aquifer between 544 and 751 feet below ground surface. The latest production data (2005) indicates annual production of just over 478 acre feet. Water quality data from this well was not available.

9. The Discharger submitted a "Building 1/36 (Parcel C) Source-Area Groundwater In-Situ Reactive Zone Pilot Test Workplan" (Arcadis Work Plan), prepared by Arcadis, dated May 10, 2002. The Arcadis Work Plan was approved by the Executive Officer on October 29, 2002. The Arcadis Work Plan presents the rationale and procedures for pilot-scale implementation of enhanced in-situ bioremediation at the subject treatment area at the Site. The Discharger proposed to conduct a pilot study in order to evaluate the effectiveness of in-situ remediation of dissolved chlorinated VOCs, primarily TCE, in the groundwater beneath the Site. The pilot study was proposed to be conducted by injecting a carbohydrate solution consisting of 10% to 20% molasses and cheese whey (referred to as the Solution). The Solution was to be injected through permanently installed wells to optimize and enhance biodegradation of chlorinated VOCs. The infrastructure was installed at the Site; however, the pilot study presented in the approved Arcadis Work Plan was not conducted by the Discharger.

10. The Discharger submitted an Addendum to the Arcadis Work Plan, prepared by Camp, Dresser, McKee, Inc. (CDM), dated February 1, 2007 (CDM Work Plan). The CDM Work Plan was approved on April 3, 2007. The CDM Work Plan presents the rationale and procedures for modifying and supplementing the Arcadis Work Plan by adding groundwater extraction, converting to semi-continuous injections, and adding bioaugmentation. The new approach is referred to as biorecirculation. The pilot study is proposed to verify the effectiveness of biorecirculation to reduce VOC concentrations and mass within the Bellflower Aquitard beneath the Building 1/36 area of the Site. The pilot study is proposed to be conducted by the following: 1) continuous groundwater extraction from the B-Sand from well EWB001; 2) conveyance of the extracted water to the remediation compound in the northeast corner of the Building 1/36 area; 3) continuous re-injection of groundwater into the B-Sand using a limited subset of existing amendment wells via existing conveyance; and 4) periodic pulsed addition of electron donor/carbon source solution and one or two-time addition of bioaugmentation cultures into the extracted water prior to re-injection. The electron donors/carbon sources and bioaugmentation cultures being evaluated during the pilot study includes: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, Newman Zone, Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. It is anticipated that the extracted water will be amended with the electron donor for approximately 5% to 50% of the operational time. A tracer such as bromide may be added to the re-injected groundwater in order to improve understanding of the local hydraulics. If a tracer test is performed, monitoring for the tracer will be performed. The periodic/pulsed injection of electron donor is expected to minimize the potential for biofouling. However, if necessary, low concentrations of biofouling control chemicals which are routinely used for rehabilitation of drinking water wells (chlorine dioxide [CAS 10049-04-4] and/or hypochlorite [CAS 7778-54-3] or a weak organic acid [i.e., LBA cleaner]) may be added, as part of non-routine maintenance.

11. The Discharger may elect to continue and/or expand the biorecirculation study across the entire Building 1/36 area using a combination of existing injection well network and new infrastructure.

TENTATIVE

Prior to continuing or expanding the study, the Discharger will submit another Addendum to the Arcadis Work Plan for the Regional Board approval.

12. The Discharger also submitted a "Building 2 In-Situ Reactive Zone Pilot Test Workplan" (Arcadis Building 2 Work Plan), prepared by Arcadis, dated August 15, 2001. On November 6, 2002, the Regional Board approved an "Addendum to the Building 2 In-Situ Reactive Zone Pilot Test Work Plan" (Addendum, dated July 31, 2002). It was then determined on February 4, 2003 by the Regional Board staff and the Executive Officer that the proposed discharge meets the conditions specified in Regional Board Order No. R4-2002-0030 "General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites" (General WDR). Infrastructure including injection (or amendment) wells and piping were installed between May and September 2003 at Building 2. In general, the injection well networks were designed to treat TCE concentrations in excess of 5 milligrams per liter (mg/l) in groundwater beneath the source areas. The pilot study was proposed to be conducted by injecting a carbohydrate solution consisting of 13% molasses and potable water into the injection well networks. Amendment injections were initiated at the Site in 2004; however, technical difficulties prompted a review of the selected amendment and injection methods and no further amendment injections have been conducted at the Site since the fourth quarter 2004.

13. The Discharger may elect to continue periodic slug injections or initiate biorecirculation as part of additional pilot study at Building 2 area using a combination of existing injection well network and new infrastructure. Prior to implementing any such additional injections, the Discharger will submit an Addendum to the Arcadis Building 2 Work Plan for the Regional Board approval. If conducted, it is anticipated that one or more of the following electron donors/carbon sources will be used: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, and Newman Zone; and one of the following bioaugmentation cultures will be used: Shaw's SDC-9™ culture, or SiREM's KB-1™ culture. With the exception of the JRW proprietary fermentation mother liquor and citrate, the rest of the electron donors/carbon sources are approved for use under the General WDR. This Site-Specific WDR will cover the use of all of the above-mentioned electron donors/carbon sources; therefore, once this permit is adopted, a letter rescinding the General WDR will be issued.

14. The Discharger proposes to include control measures for the biorecirculation pilot study. The control measures would be implemented if electron donor/carbon source amendment and Dehalococcoides ethenogenes (DHE) associated with the bioaugmentation culture are detected in monitoring points outside the treatment zone. The control measure would involve stopping further addition of amendments to the groundwater. After this control measure has been implemented the remaining amendments in the groundwater will naturally break down, effectively removing food source and allowing the groundwater system to return to more aerobic conditions. The bioaugmentation culture (Shaw's SDC-9™ culture or SiREM's KB-1™ culture) requires an electron donor/carbon source amendment (food), VOCs, and anaerobic conditions to survive. Given these growth requirements, the bioaugmentation culture will not survive due to the loss of the food source and anaerobic conditions.

15. If the above mentioned control measure does not prevent the offsite migration of the electron donors/carbon sources and/or the bioaugmentation cultures, a contingency plan, involving the installation of a hydraulic containment system, will be implemented. The slow rate of groundwater

TENTATIVE

flow within and down gradient of the pilot study areas allows for sufficient time to complete design, installation, and implementation of a hydraulic containment system if necessary.

16. Any injection of a solution into the groundwater is a discharge of waste as defined by the California Water Code. However, the discharge of the electron donor/carbon source solution with bioaugmentation culture is intended to provide more effective remediation of chlorinated VOC-impacted groundwater and is expected to significantly reduce the anticipated Site cleanup time as compared to pump-and-treat technology or enhanced in-situ bioremediation without addition of a bioaugmentation culture.

17. The application of electron donor/carbon source amendment and bioaugmentation cultures to groundwater may result in temporary adverse impacts to groundwater quality, but impacts that may result will be localized, and of short-term duration, and will not impact any existing or prospective uses of groundwater.

18. The Regional Board adopted a revised Water Quality Control Plan (Plan) for the Los Angeles Region on June 13, 1994. The Plan contains beneficial uses and water quality objectives for the Central Groundwater Basin. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Plan.

19. The beneficial uses for the Central Groundwater Basin are municipal and domestic water supply, industrial service and process supply, and agricultural supply.

20. The permitted discharge is consistent with the anti-degradation provisions of State Water Resources Control Board Resolution No. 68-16 (Anti-degradation Policy). The discharge may result in some localized temporary exceedances of background concentrations of total organic carbon, iron, manganese, arsenic, TDS, and certain microorganisms. However, after the injection of amendments, these parameters are not anticipated to exceed the primary or secondary standards to the extent that these parameters do not already exceed the respective standard. Moreover, any parameter change resulting from the discharge:

    a. Will be consistent with maximum benefit to the people of the State.
    b. Will not unreasonably affect present and anticipated beneficial uses of such water, and
    c. Will not result in water quality less than that prescribed in the Water Quality Control Plan for Central Groundwater Basin.

21. The Regional Board has assumed lead agency role for this project under the California Environmental Quality Act (Public Resources Code section 21000 et seq.) and has conducted an Initial Study in accordance with section 15063 of the "State CEQA Guidelines" at California Code of Regulations, title 14, section 15000 et seq. Based upon the Initial Study, the Regional Board prepared a Mitigated Negative Declaration that the project, as mitigated, will not have a significant adverse effect on the environment.

22. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written comments and recommendations. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

TENTATIVE

IT IS HEREBY ORDERED that Boeing Realty Corporation, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, shall comply with the following:

A. Discharge Limits

1. The Discharger shall not cause the groundwater outside of the treatment area (as defined by the upgradient and downgradient wells in Figure 4) to exceed background concentrations of chloride and TDS established prior to start of remediation.

2. The discharge of the electron donor amendment solution into the groundwater shall be only performed while this Order is in force.

3. During this remediation, the injection volume of electron donor amendment solution shall not exceed 0.5 million gallons, unless approved by the Executive Officer.

4. Discharge duration shall not exceed more than two years, unless approved by the Executive Officer.

5. The amendment solution shall be limited to potable water, extracted groundwater, and amendments specified in the pilot study work plans as approved. The amendments will consist of a mixture of water with one or more of the following: whey powder, citrate (either as citric acid or sodium citrate), lactate (either as sodium lactate or lactic acid), JRW proprietary fermentation mother liquor, or Newman Zone, at a maximum concentration of up to 3% (30,000 mg/L). In addition, biological cultures (Shaw's SDC-9™ culture, or SiREM's KB-1™ culture) will be introduced into the groundwater for a maximum of two separate events during the pilot study at typical concentration of 1,010 cells/ml.

B. Discharge Specifications

1. The Discharger shall stop further addition of amendments to the groundwater if the electron donor amendment solution is observed to be migrating off-site. After this control measure has been implemented the remaining amendments in the groundwater will naturally break down, effectively removing food source and allowing the groundwater system to return to more aerobic conditions.

2. The Discharger shall not cause the electron donor amendment solution and the by-products of the bioremediation process to migrate outside of the treatment area established by the Discharger and approved by the Executive Officer.

3. The discharge of the electron donor amendment solution or any by-products into any surface water or surface water drainage course is prohibited.

4. The Discharger shall not cause the groundwater to contain taste or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses outside the treatment area.

5. The Discharger shall not cause the groundwater to contain concentrations of chemical substances or its by-products, including the electron donor amendment solution in amounts that adversely affect any designated beneficial use as a result of the injection of solution.

TENTATIVE

6. The Discharger shall implement hydraulic control to prevent off-site migration if necessary.

C. Provisions:

1. This Order includes the attached "Standard Provisions Applicable to Waste Discharge Requirements," which are incorporated herein by reference. If there is any conflict between provisions stated herein before and the attached "Standard Provisions," those provisions stated herein shall prevail.

2. Discharge of wastes to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.

3. In the event of any change in name, ownership, or control of the Site, the Discharger shall notify this Regional Board in writing and shall notify any succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to this Regional Board.

4. A copy of these requirements shall be maintained at an on-site office and be available at all times to operating personnel.

5. In accordance with section 13260 of the California Water Code, the Discharger shall file a report of any material change or proposed change in the character, location or volume of discharge.

6. The Discharger shall notify Regional Board immediately by telephone of any adverse condition resulting from this discharge or from operations producing this waste discharge, such notifications to be affirmed in writing within one week from the date of such occurrence.

7. This Regional Board considers the property operator and owner to have continuing responsibility of correcting any problem that may arise in the future as a result of this discharge.

8. All work must be performed by or under the direction of a registered civil engineer, registered geologist, or certified engineering geologist. A statement is required in all technical reports that the registered professional in direct responsible charge actually supervised or personally conducted all the work associated with the project.

9. The use of an electron donor amendment shall not cause a condition of pollution or nuisance as defined by California Water Code, section 13050.

10. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as specified in the attached Monitoring and Reporting Program No. CI-XXXX. Violations of any conditions may result in enforcement action, including Regional Board or Court Order requiring corrective action or imposition of civil monetary liability, or revision, or rescission of the Order.

11. This Order does not exempt the Discharger from compliance with any other laws, regulations, or ordinances, which may be applicable. This Order does not legalize the waste treatment Site, and leaves unaffected any further restraints on the Site that may be contained in other statutes or required by other agencies.

TENTATIVE

12. The Discharger shall cleanup and abate the effects of injecting amendment solution as specified in the General WDR permit and this Order, including extraction of any by-products which adversely affect beneficial uses, and shall provide an alternate water supply source for municipal, domestic or other water use wells that become contaminated in exceedance of water quality objectives as a result of using the solution.

13. In accordance with section 13263 of the California Water Code, these requirements are subject to periodic review and revision by this Regional Board.

14. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:

    a. Violation of any term or condition contained in this Order.
    b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts.
    c. A change in any condition that requires either a temporary or permanent reduction or elimination of authorized discharge.

15. The Regional Board, through its Executive Officer, will modify the Monitoring and Reporting Program, as necessary. The California Environmental Quality Act (CEQA) initial study and associated public comment were conducted once as part of the Waste Discharge Requirement (WDR) permit application process and will not be required for the expansion or modification of this remediation program.

D. Expiration Date

This Order expires on July 12, 2012.

The Discharger must file a Report of Waste Discharge in accordance with title 27, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

I, Deborah J. Smith, Interim Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on July 12, 2007.

TENTATIVE

_____
Deborah J. Smith
Interim Executive Officer

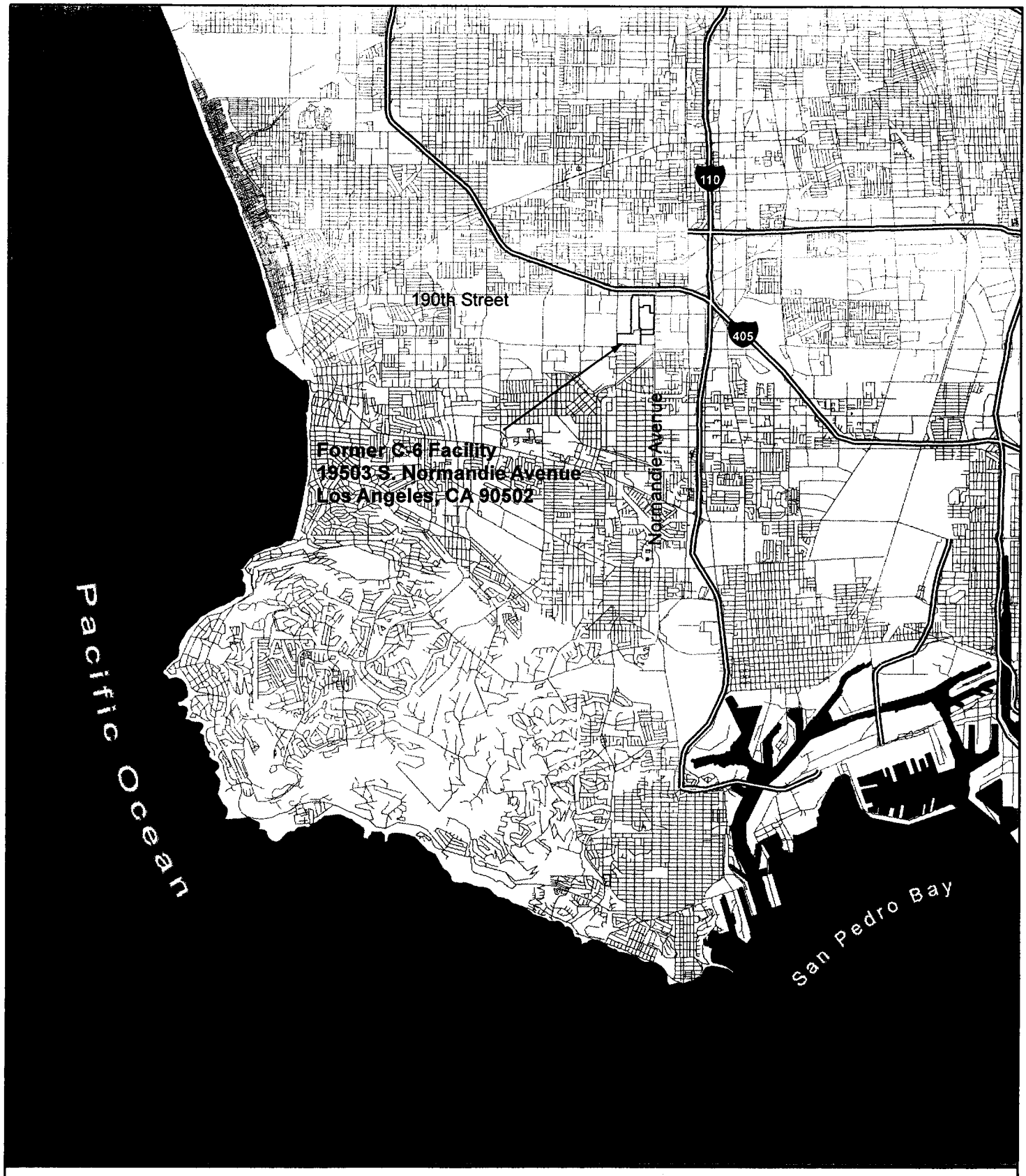

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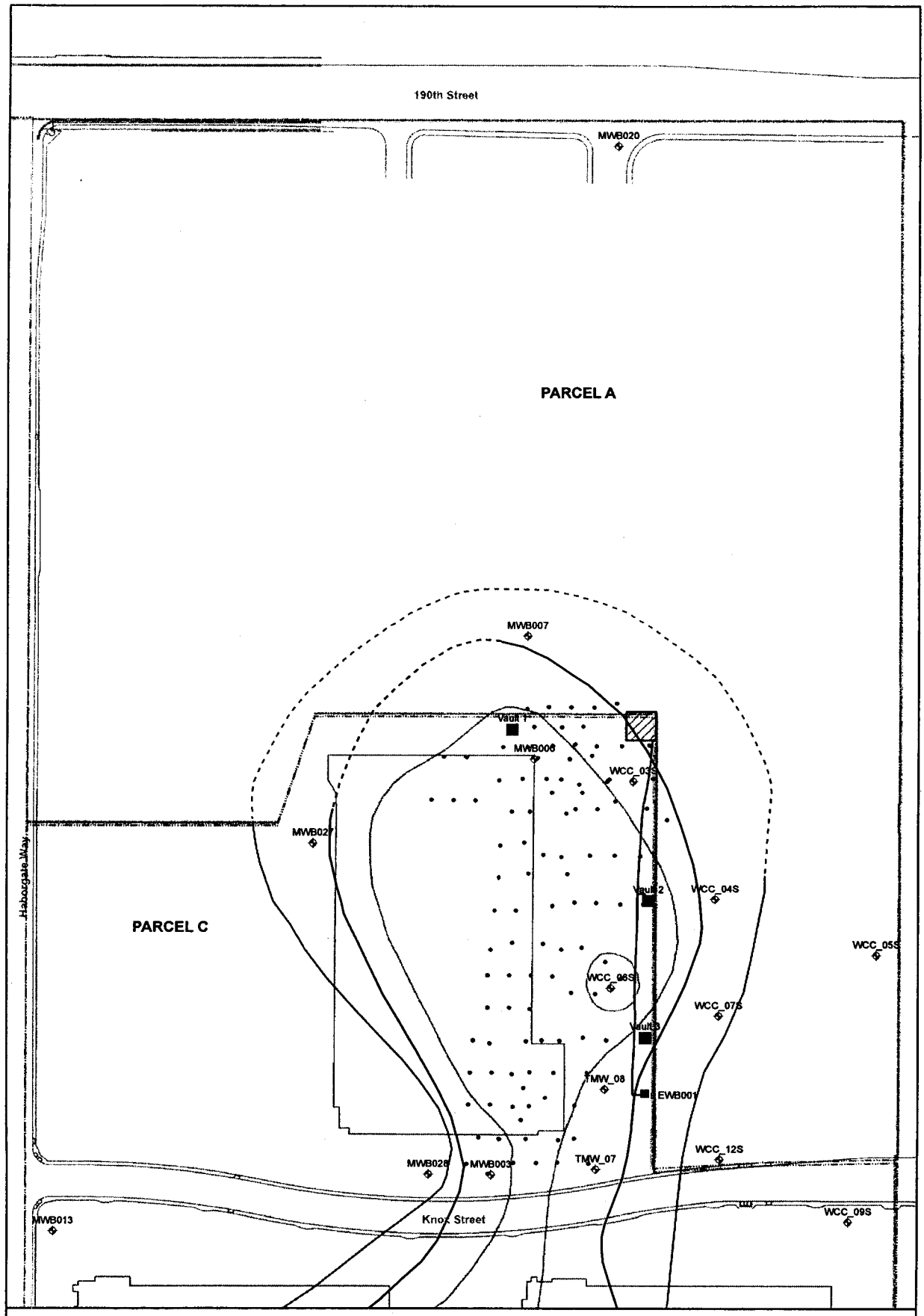
Figure 1

Boeing Realty Corporation
Former C-6 Facility

Site Vicinity Map

CDM



April 16, 2007

Legend

- Property Boundary
- Parcel Boundary
- Existing Compound
- Existing Spare Electrical Conduit and Water Piping

TCE and 1,1-DCE Isoconcentration Contours March, 2006 (B-Sand)

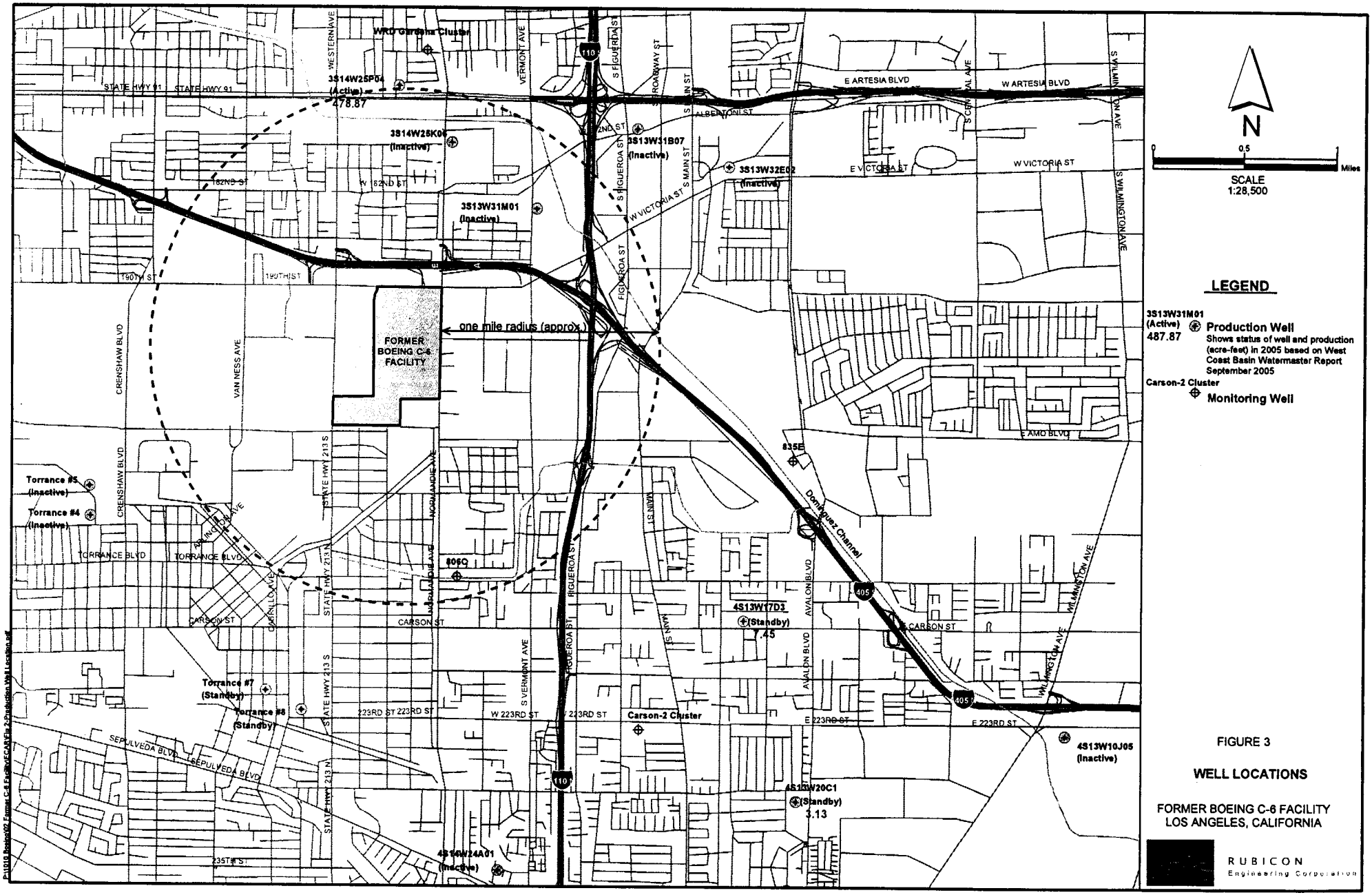
- 10 - 99 (µg/L)
- 100 - 999 (µg/L)
- 1,000 - 4,999 (µg/L)
- 5,000 - 9,999 (µg/L)
- > 10,000 (µg/L)

- Existing Vault
- B-Sand Extraction Well
- B-Sand Monitoring Well
- B-Sand Amendment Well

CDM

Boeing Realty Corporation
Former C-6 Facility
Distribution of TCE in B-Sand
Former Building 1/36

Figure 2



LEGEND

3S13W31M01
(Active)
487.87
Production Well
Shows status of well and production (acre-feet) in 2005 based on West Coast Basin Watermaster Report September 2005

Carson-2 Cluster
Monitoring Well

FIGURE 3

WELL LOCATIONS

FORMER BOEING C-6 FACILITY
LOS ANGELES, CALIFORNIA

RUBICON
Engineering Corporation

P:\1010_Boeing\02_Former_C-6_Fac\Rvt\ECAB\Fig 2-2\Production Well Locations.pdf

STANDARD PROVISIONS
APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350]

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). [H&SC Section 5411, CWC Section 13263]

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. [CWC Section 13263]

4. CHANGE IN OWNERSHIP

The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. [CWC Sections 13267 and 13263]

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:

(a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the Waste.

(b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.

(c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.

(d) Increase in flow beyond that specified in the waste discharge requirements.

(e) Increase in the area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]

7. TERMINATION

Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]

8. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge. [CWC Section 13263(g)]

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provision of these requirements are found invalid, the remainder of the requirements shall not be affected. [CWC Section 921]

10. OPERATION AND MAINTENANCE

The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order. [CWC Section 13263(f)]

11. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. [CWC Section 1327(a)]

12. PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. [CWC Section 13272]

13. ENTRY AND INSPECTION

The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

(d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

14. MONITORING PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. [CWC Section 13267]

All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Office a written statement, signed by a registered professional engineer, certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Regional Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" [40CFR Part 136] promulgated by the U.S. Environmental Protection Agency. [CCR Title 23, Section 2230]

15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost. [CWC Section 13263(f)]

16. DISCHARGE TO NAVIGABLE WATERS

Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 fo the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Regional Board. [CCR Title 2 Section 22357]

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Office within 24 hours:

(a) Any bypass from any portion of the treatment facility.

(b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.

(c) Any treatment plan upset which causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies off all reports required by this Order, and record of all data used

to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Records of monitoring information shall include:

(a) The date, exact place, and time of sampling or measurement;

(b) The individual(s) who performed the sampling or measurement;

(c) The date(s) analyses were performed;

(d) The individual(s) who performed the analyses;

(e) The analytical techniques or method used; and

(f) The results of such analyses.

19. (a) All application reports or information to be submitted to the Executive Office shall be signed and certified as follows:

(1) For a corporation – by a principal executive officer or at least the level of vice president.

(2) For a partnership or sole proprietorship – by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency – by either a principal executive officer or ranking elected official.

(b) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:

(1) The authorization is made in writing by a person described in paragraph (a) of this provision.

(2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and

(3) The written authorization is submitted to the Executive Officer.

Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. [CWC Sections 13263, 13267, and 13268]"

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the PUC, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with Title 23, California Code of Regulations Section 3680. State Boards may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plan operator of appropriate grade certified by the State Department of Health Services where reclamation is involved.

Each plan shall be operated and maintained in accordance with the operation and maintenance manual prepared by the municipality through the Clean Water Grant Program [CWC Title 23, Section 2233(d)]

ADDITIONAL PROVISIONS APPLICABLE TO
PUBLICLY OWNED TREATEMENT WORKS' ADEQUATE CAPACITY

21. Whenever a publicly owned wastewater treatment plant will reach capacity within four years the discharger shall notify the Regional Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The discharger must demonstrate that adequate steps are being taken to address the capacity problem. The discharger shall submit a technical report to the Regional Board showing flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Board, or within 120 days after receipt of notification from the Regional Board, of a finding that the treatment plant will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Board itself. [CCR Title 23, Section 2232]

STATE OF CALIFORNIA
CALIFORIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-XXXX
FOR
BOEING REALTY CORPORATION
FORMER C-6 FACILITY

FILE NO. 95-036

TENTATIVE

The Discharger shall implement this monitoring and reporting program on the effective date of this Order.

I. GROUNDWATER MONITORING PROGRAM

It is anticipated that the pilot test will be initiated in the third quarter of 2007. The following groundwater wells and amendment points will be included in the sampling program:

Group A:	AW0064UB, AW0065UB, AW0066UB, and AW0067UB
Group B:	AW0074UB, AW0075UB, AW0076UB, AW0077UB, WCC_06S, EWB002, and AW0073C,
Group C:	TMW_07 and WCC_12S
Group D:	AW0055UB

Figure 1 shows the location of the site. Groundwater well and amendment point locations at the Site that will be used for the Pilot Study are shown in Figure 4. Group A sampling points are amendment points. Group B wells consist of monitoring wells that are located within the treatment zone, and will be used to: evaluate electron donor consumption and distribution; and the effectiveness of the biologically active zones over time. All Group A and B wells will be used for performance monitoring purposes. The Group C sampling points are downgradient sample locations, and Group D is an upgradient sample point.

Baseline sampling will take place prior to injection and will include at two events. The samples analyzed for field parameters (oxidation-reduction potential, dissolved oxygen, pH, specific conductance, temperature, turbidity and groundwater elevation), chlorinated volatile organic compounds (VOCs), dissolved hydrocarbon gases (methane, ethane, and ethene) total organic carbon (TOC), volatile fatty acids (VFAs), alkalinity, dissolved minerals (ferrous iron by field kit), anions (sulfate, nitrite, nitrate, and chlorides), bacterial DNA analysis by Quantitative Polymerase Chain Reaction test (qPCR). If a tracer test is conducted, samples will be analyzed for bromide too.

The required constituents to be analyzed and the monitoring schedule for each sample group for the pilot test (estimated to be 6 months to 1 year) are shown below.

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Daily Injections	Liters or Gallons	Measurement	Per injection
Groundwater Elevation	Feet below ground surface (bgs)	In situ	Groups A & B: Baseline, monthly following injection for first six months, quarterly Groups C and D: Baseline and quarterly Group B-D: Semi-annually after four quarters
Field Parameters (Dissolved Oxygen, Oxidation-Reduction Potential, pH, Temperature, Specific Conductance, and Turbidity)	mg/l, millivolts, pH units, degrees C, µS/cm, and NTU, respectively	Grab	Group A: Baseline and quarterly after post injection Group B: Baseline, monthly following injection for first six months, quarterly Groups C and D: Baseline and quarterly Group B-D: Semi-annually after four quarters
Chlorinated Volatile Organic Compounds (EPA Method 8260B)	µg/l	Grab	Group A: Baseline and quarterly after post injection Group B: Baseline, monthly following injection for first six months, quarterly Groups C and D: Baseline and quarterly Group B-D: Semi-annually after four quarters
Total Organic Carbon (EPA Method 9060 Modified) and Volatile Fatty Acids	mg/l	Grab	Group A: Baseline and quarterly after post injection Group B: Baseline, monthly following injection for first six months, quarterly Groups C and D: Baseline and quarterly Group B-D: Semi-annually after four quarters
Dehalococcoides spp. strains (Quantitative Polymerase Chain Reaction test [qPCR])	gene copies/mL	Grab	Group A: Baseline and quarterly after post injection Group B: Baseline, monthly following injection for first six months, quarterly Groups C and D: Baseline and quarterly Group B-D: Semi-annually after four quarters
Dissolved Metals (Ferrous Iron by field kit), Alkalinity, and Anions (sulfate, nitrate, nitrite and chlorides)	mg/l	Grab	Group A: Baseline and quarterly after post injection Group B: Baseline, monthly following injection for first six months, and quarterly Groups C and D: Baseline and quarterly Group B-D: Semi-annually after four quarters
Dissolved Hydrocarbon Gases (ethane, ethane, and methane)	mg/l	Grab	Group A: Baseline and quarterly after post injection Group B: Baseline, monthly following injection for first six months, and quarterly Groups C and D: Baseline and quarterly Group B-D: Semi-annually after four quarters

All groundwater monitoring reports must include, at minimum, the following:

a. Well identification, date and time of sampling;
b. Sampler identification, and laboratory identification; and
c. Semi-annual observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

II. AMENDMENT INJECTION MONITORING REQUIREMENTS

The reports shall contain the following information regarding injection activities:

1. Depth of injection points;

2. Quantity of amendment injected and dates injected; and

3. Total amount of amendment injected.

III. REPORTING REQUIREMENTS

The first monitoring report under this Program is due by 30 October 2007. This monitoring and reporting program supercedes previous requirements stated in work plan approval letters.

The Discharger is required to submit a preliminary report including baseline and donor injection data, plus quarterly reports for the duration of the pilot test, which is estimated to be 6 months to a year. If necessary, semi-annual monitoring reports will be submitted for each additional year. The groundwater monitoring wells and amendment points will be gauged and sampled, and results will be reported to the Regional Water Quality Control Board (Regional Board) under this Monitoring and Reporting Program according to the following schedule:

Reporting Period	Sampling Month(s)	Report Due Date
April – June 2007 (Baseline)	May – June 2007	July 30, 2007
July – September 2007	July, August, and September, 2007	October 30, 2007
October – December 2007	October, November, and December 2007	January 30, 2008
January – March 2008	February 2008	April 30, 2008
April – June 2008	May 2008	July 30, 2008
July – December 2008	September 2008	January 30, 2009
January – June 2009	March 2009	July 30, 2009

The Discharger shall submit Reports detailing the results of the pilot test. The reports should include an evaluation of the effectiveness of using the amendment solution to remediate VOC-contaminated groundwater at the Site, the impact of any by-products on the receiving groundwater quality, and any other effects the *in situ* treatment may have. The Discharger is required to submit the following reports pursuant to their respective due dates:

Report	Due Dates
Preliminary Report	April 30, 2008
Final Report	July 30, 2009

If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

Whenever wastes associated with the discharge under this Order are transported to a different disposal site, the following shall be reported in the monitoring report: type and quantity of wastes; name and address of the hauler (or method of transport if other than by hauling); and location of the final point(s) of disposal.

TENTATIVE

IV. CERTIFICATION STATEMENT

Each report shall contain the following completed declaration:

> "I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.
>
> Executed on the _____day of _____ at _____.
>
> _____(Signature)
>
> _____(Title)"

V. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by: _____ Date: _____
Interim Executive Officer

TENTATIVE

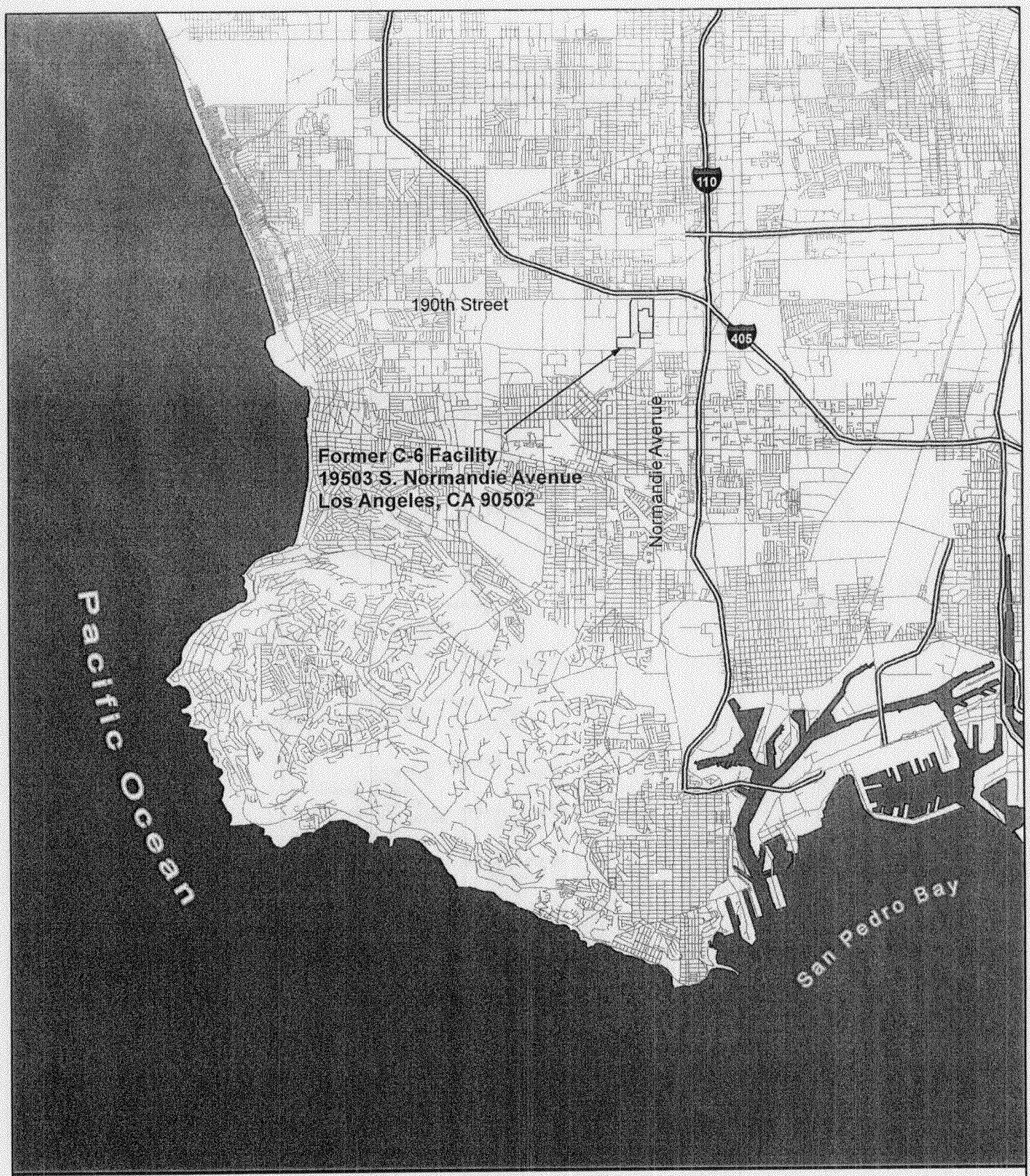


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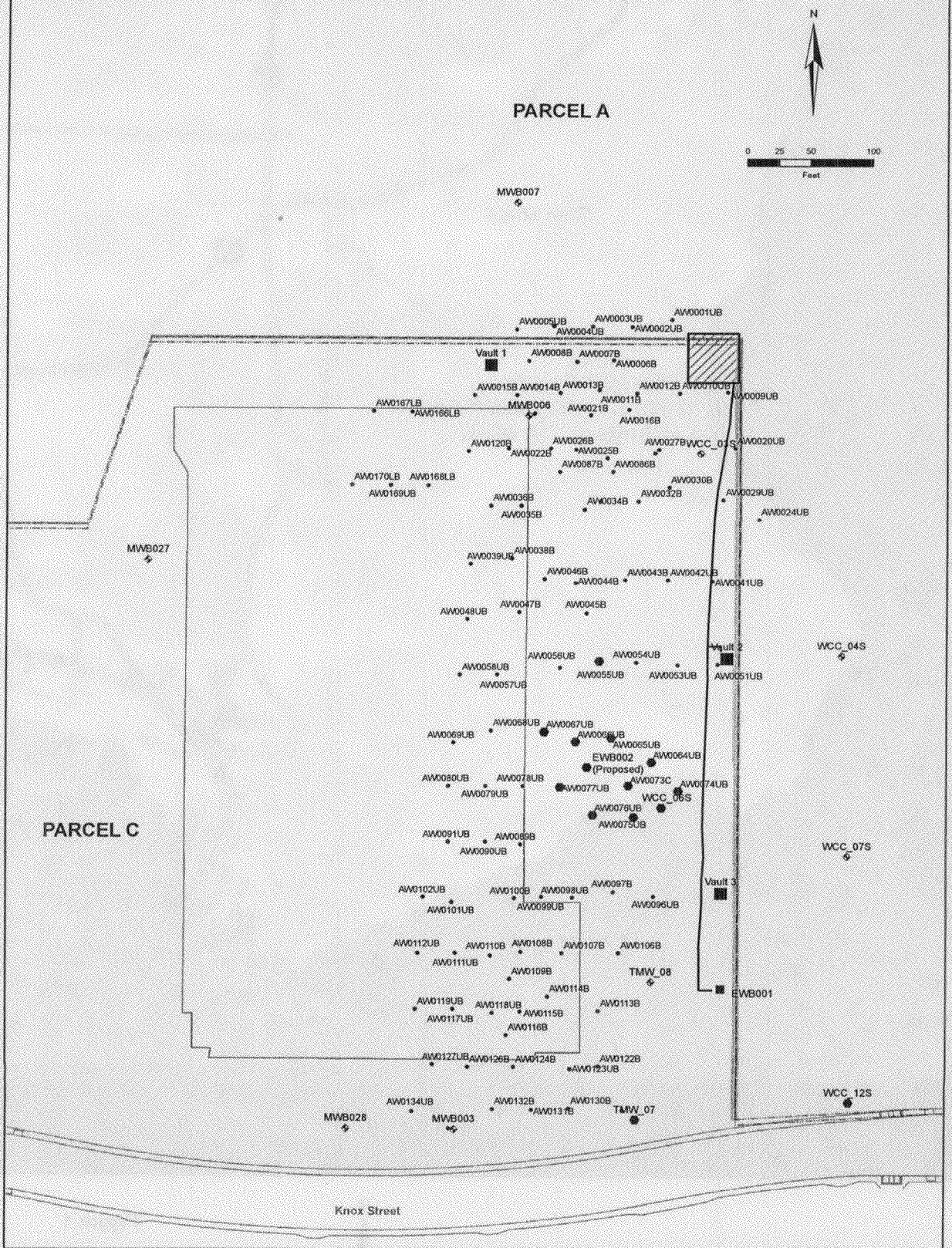
Figure 1

Boeing Realty Corporation
Former C-6 Facility

Site Vicinity Map

CDM

NOTE:
1. Existing well vaults and conveyance piping, as shown, will be used to transport extracted groundwater to the treatment compound and amended water back to select amendment wells.
2. A limited subset of the existing amendment and monitoring wells will be used for the pilot study.



April 16, 2007

CDM

Legend

- Property Boundary
- Parcel Boundary
- Existing Compound
- Existing Vault
- B-Sand Extraction Well
- B-Sand Monitoring Well
- B-Sand Amendment Well
- Existing Spare Electrical Conduit and Water Piping
- Group A Amendment Well (Upper B-Sand)
- Proposed Group B Monitoring Well (Upper B-Sand)
- Group B Monitoring Well ((5) Upper B-Sand and (1) C-Sand)
- Group C Downgradient Well (B-Sand)
- Group D Upgradient Well (Upper B-Sand)

Boeing Realty Corporation
Former C-6 Facility
Proposed Biorecirculation Pilot Study Well Layout

Figure 4